

Okay for Sound

Sound

... How the Screen Found Its Voice

Edited by FREDERIC THRASHER

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Introduction

The motion picture has the distinction of being the only great art form to be born in modern times. Its beginnings and its development are well within the purview of living men and women; its history is being preserved and studied by an increasing number of organizations and college courses which have become devoted to it. It is fitting, therefore, that this volume dealing with the application of sound to this vibrant new art be written now while many of the great pioneers in sound film development are still living and while we are able to record the recollections fresh in their minds of the difficulties and problems they have encountered and have so ingeniously overcome.

The amazing story of the motion picture during the short period of 50 years since April 23, 1896, when the first projected film was shown commercially in America at Koster and Bial's Music Hall in New York City, is as exciting as it is kaleidoscopic. During this half-century from 1896 to 1946, creative and destructive in so many aspects of the world's culture, the motion picture has made superb progress. It has served the American people magnificently both in peace and in war. It has provided entertainment for about 100,000,000 people in America, and to millions more throughout the world, and incidentally, through the theater-shown film has become one of the greatest educational forces in modern times.

The rapid, indeed phenomenal, technical advance of the motion picture is a monument to the inventive genius and engineering skill of the pioneers and later specialists who have brought the motion picture camera, the projector and the other innumerable technical devices necessary to smooth production and projection to such a high pitch of perfection. In addition to the miracle that projected pictures on a screen should move at all, the greatest moments in motion picture history so far as the public is concerned are the appearance of sound and color emanating from the screen.

The present volume represents the first attempt to deal specifically and pictorially with the application of sound to the moving film and is in celebration of the twentieth anniversary of that momentous development, with which the names of Harry M., Jack L., Albert W., and especially the late Sam Warner will always be so significantly linked. It was due to the imagination, indeed the vision, of these pioneers and their associates that the ultimate development and perfection of sound motion pictures was made possible. And so, it is eminently fitting and proper that this volume be dedicated not only to the Warners' contribution to the introduction and development of sound motion pictures but to recording the whole story of sound communication and the far-reaching artistic and social implications which have been brought about by the perfection of sound reproduction as an integral part of the motion picture.

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Part I - FINDING A VOICE



CHAPTER ONE

Out of the Laboratory

THOMAS EDISON was annoyed. Seated in his West Orange laboratory on October 6, 1889, his ears glued to the listening tubes of the phonograph which he had invented twelve years before, he skeptically awaited the world's first demonstration of sound motion pictures.

As a one-man "guinea pig" audience at this historic premiere, Edison may have doubted that recorded sound, synchronized with pictures in motion, could succeed. His doubt, however, sprang not from lack of faith in the idea, but rather from the brashness of his 29-year-old assistant, Laurie Dickson, who had, against orders, and while Edison was off in Europe, spent the shocking sum of \$516.64 to build a photographic laboratory. Edison was irritated but not surprised. He had come to expect such things of Dickson.

In 1879, just after Edison had announced the invention of his phonograph, young Dickson wrote him from England, asked for a job in the wizard's laboratory and Edison turned him down.

Ignoring the snub, Dickson took a chance and applied in person two years later. "But I told you not to come, didn't I?" asked Edison. Then in the next breath, the great inventor said, "You had better take off your coat and go to work." And Dickson did.

After six years' apprenticeship, Edison assigned him to work on a method for combining moving pictures with recorded sound.

When Edison sailed for Europe, Dickson ordered a new laboratory with a sliding glass roof built and threw himself into sound picture work. When Edison returned Dickson had a surprise ready for him—the *kinetophone*.

This first talkie, seen by Edison, presented Dickson the actor as well as Dickson the inventor. As he recalled the performance: "I was seen to advance and address Mr. Edison from the small four-foot screen; small, because of the restricted size of the room. I raised my hat, smiled, and said, 'Good morning, Mr. Edison, glad to see you back. Hope you will like the *kinetophone*. To show the synchronization I will lift my hand and count up to ten.' I then raised and lowered my hands as I counted to ten. There was no hitch and a pretty steady picture."

Thus on October 6, 1889, sound movies were first attempted. Edison, the man of magic,

who had invented the talking machine and the electric light, now gave the world the motion picture machine, and *synchronized it with sound*. Dickson, actually, only developed Edison's theories. He did not invent them. Edison had been playing with the idea of a machine "which should do for the eye what the phonograph does for the ear, and that by a combination of the two, all motion and sound could be recorded and reproduced simultaneously." Assigning Dickson to the project, he said, "Try it; it will lead to other things."

Edison lived to see only some of the "other things" he had predicted. When he died in 1931, sound motion pictures had produced a revolution in the field of entertainment which even Edison could not have foreseen.

Today, motion pictures are Big Business in America and the world. Last year in the United States they provided entertainment at the rate of 95,000,000 paid admissions *per week*. Today, they give employment to more than 200,000 people, and their studios and distributing facilities, with an invested capital exceeding \$2,000,000,000, pay out close to \$350,000,000 in wages and salaries annually. But the sociological role of sound motion pictures is as important as the statistics of the industry's operations are impressive. Thomas Edison invented more than a machine to entertain, he unleashed a potent force for the good of society.

This was a force whose power men had always known. Ever since the beginning of history, human beings have been aware of the sounds and signs around them. But even though men understood the nature of sound, celebrated it in literature and lived by it, they were unable to control it except in the most primitive way. How to capture something so transitory was one problem—how to transmit and amplify sound was another. How to *record* and *preserve* sound was still another. And how to combine recorded sounds with moving images of the men who made them—this was beyond man's wildest dreams. Not until Alexander Graham Bell invented the telephone had many men imagined such a possibility. Bell's invention, in 1876, set off a chain-reaction of scientific discovery. The following year came the invention of Thomas A. Edison's talking machine. Beginning with these two marvels, there occurred, between 1876 and 1907, a series of inventions which were to usher in a new era of history. During this brief span of less than half a lifetime, the world was to receive the telephone, phonograph, electric light, gasoline automobile, photographic film and roll holder, recording adding machine, the motion picture, high-frequency wireless, the airplane and the 3-element tube, called the audion. As Winston Churchill might have described this epochal era, "never, in so short a time, had so much been discovered by so few." These inventive explosions in the world of science reverberated around the earth and started an upheaval in society which is still continuing. Man's culture, economic system, religion and mores were—and still are being—vitaly affected by their impact.

The crude beginnings of every invention can be traced back for centuries. The history of the motion picture begins with the cave drawings, in which early man attempted to capture the illusion of motion. The next step was projection of still pictures—and then, by rotation of a series of stills, to give the effect of motion. Finally, came the projection of moving pictures.

Edison's experiments might never have borne fruit if he had not found a photographic

film which could operate in a camera taking 20 to 40 pictures per second. Edison had to have this roll film, and, fortunately for him, another inventor, George Eastman, had been working to achieve it and was about to produce it. For years George Eastman had been striving to find a suitable substitute for cumbersome photographic plates. When he finally produced the transparent roll film so eagerly awaited by Edison, the latter exclaimed: "That's it!" Then taking off for Europe, he urged his assistant, Laurie Dickson: "Now work like hell!" Dickson did and succeeded.

Logically, a feverish burst of activity should have followed that signal event. On the contrary, progress seems to have stopped for four years. Edison concentrated his efforts upon the phonograph. Some say that Edison's growing deafness turned his mind to the importance of sound and away from the motion picture. Others say that Edison was piqued at Dickson's enterprise in perfecting the *kinetophone* during his absence. Whatever the reason, the fact remains that the motion picture stood still for four years. And, strangely enough, out of Edison's early experiments came *silent*—not sound films.

It was not until 1893 that Dickson built what was probably the first movie studio, for the staggeringly low price of \$637.67. Called the "Black Maria," because it was a shed painted black inside and out, it rested on a revolving base which could turn to follow the sun and keep the actors brightly lighted against black backgrounds. Like most early "producers," Dickson used home-lot talent. One of his most famous films, made in 1893, gave the public Fred Ott, an Edison mechanic, in *The Sneeze*. Needless to say, the only prop was a jar of red pepper.

Production of Edison kinetoscope 50-foot movie films stepped up, and a Kinetoscope Parlor was opened on April 14, 1894, at 1155 Broadway. Sample offerings were *Annie Oakley*, *Buffalo Bill*, *Sandow*, *the Strong Man*, cock fights and a tooth extraction. Obviously, the "movies" responded strongly to public interests and taste. These peep shows of the gay 90's intrigued even jaded New Yorkers, and they stood before the banks of kinetoscope machines patiently waiting to drop in a penny and unreel by hand the lurid adventures fabricated by Mr. Edison and his assistants. Kinetoscopes branched out and were located in cigar shops and railway stations, as well as penny arcades.

Edison stuck to the peep show film, even while others were restlessly agitating for the projection of films on screens. Edison actually *feared* the coming of projected pictures. He believed they would kill the sale of kinetoscopes, that 50 film projectors could displace the use of thousands of peep show machines and cut the flow of rental charges to a trickle.

But no man, however great, can stop progress. With the Armat Vitascope, a projection device, the first film theater screening took place at Koster and Bial's Music Hall in New York in 1896. It was shown as part of a vaudeville act and became known as the "chaser," because the real troupers claimed that the management turned on the Vitascope when they wanted to chase people out of the theater. Even greater novelties were being shown abroad and eventually in the United States. In 1904, a London impresario featured a travel film which was shown in a theater designed to look like the inside of an observation car. During the film, the theater was made to rock and rumble to simulate actual train movement. Everything but the cinder in your

eye was included.

In 1906, Edison announced his "cameraphone" for synchronizing pictures with phonograph records. And in 1908, the "cinephone" made its appearance. The phonograph ran at a normal speed and the projectionist adjusted film speed to keep even with it. The result of this all-too-human synchronization was that the picture and the sound chased each other alternately during the showing and usually broke down completely before the end of the film.

Around 1913, Edison had perfected his kinetophone enough to project talking pictures on the screen. He placed the phonograph and its horn behind the screen, much as the sound effects of a stage production had been handled. It was not unusual for sound and picture to get out of "sync." A system of cords and pulleys, running from one end of the theater to the other, was used to get synchronization between the phonograph and projector. When the cord slipped, there was no "sync." When it broke, there was no sound. The actors went on mouthing into space or sheathed their swords five minutes after the command had been given in a rasping, jerky voice to "Sheathe thy sword." Wooden horns were later used for recording instead of metal ones, but the result was even worse, producing a "cardboard effect." Despite this primitive method, Edison produced 19 "talkies" ranging in subject matter from *Brutus and Cassius* to *College Days*.

The public was responsive, as was the press—at first. The *New York Times* announced: "New York applauds the talking picture." But the novelty wore off, the synchronization was a great deal less than perfect, and the critical charity changed to abuse. Always frank, *Variety* wrote—"The talking, instead of enhancing the picture, simply annoys . . . the general verdict was that the Edison Pictures are an out-and-out flop." . . . "Talking pictures booed in Union Square theater." A fire in the Edison laboratories in 1915 might have been an act of God for Edison. At any rate, it resolved the question of success or failure by simply eliminating further production of "talkies" for the time being.

Silent movies, with sound effects contributed by the man in the pit, reached the public in ever-increasing number. The early sound-effect man could reproduce doors banging, thunder, hail, a mouse squeak, the crash of an overturned chair. There was often considerable discrepancy between the sound and the picture, with ludicrous results. In the course of a medieval battle, the rattle of machine guns would be heard, and horses trotted over marshland with all the clatter of a New York horsecar. The *Allefex* was used in many theaters to produce more than 50 sounds. This ingenious device, four feet high and three feet wide, could reproduce a waterfall, church bells or racing horses. Its manufacturers advertised it confidently enough to convince the most skeptical exhibitor: "Thunder is made by shaking a sheet of steel hanging on one side of the machine; the press of a bulb gives the bark of a dog; the bellows and another attachment operate the warbling bird, while the cry of a baby is emitted by the dexterous manipulation of plughole and bellows."

Piano accompaniment was also a feature of the silent films, and the piano player became a regular Saturday night target for the peanut shells of kids, whose five-cent weekly allowance inevitably went through the ticket window of the nickelodeon. The pianist's art required rapid

changes in mood, from terror to pity to love, in three minutes. It was a demanding craft for small-town piano teachers who picked up a little extra cash playing in the pit.

While experimentation with the talkies was going on, the main stream of scientific research continued. Actually, the talking motion picture as we know it today owes little to men who worked out mechanical devices for synchronizing sound and film. Edison's major contributions to the application of sound to motion pictures were his phonograph and incandescent lamp, not the kinetophone or cameraphone. Other discoveries growing out of Bell's telephone invention were to play the major role in giving the screen a voice.

The turning point in the progress of sound pictures was the development of the 3-element vacuum tube which made sound amplification possible. In 1907, a young scientist named Lee DeForest patented the audion which was to father modern electronics, produce over \$6,000,000,000 in industries and more than 1,000,000 jobs. It would also make talking pictures a reality, for amplification of sound as it was recorded or reproduced was now possible, a step without which today's sound movies could not exist.

After personal, financial and professional failures dogged his heels for five years, DeForest managed to set up a demonstration of his amplifier before technicians of the Western Electric Company on October 31, 1912. Dr. Harold D. Arnold was interested in the invention and foresaw its great possibilities in the art of telephony. In the spring of 1913, Western Electric purchased the audion and all rights thereto from DeForest.

Dr. Arnold felt that the tube's action was electronic and that the current consisted of a flow of electrons rather than gaseous ions. By pumping nearly all the gas out of the tube, he obtained a high vacuum and so purified the electronic stream. The smallest impulse could enter the vacuum tube through the grid and be amplified 130 times. Today, some vacuum tubes will amplify 1,000 times. By putting several tubes in series, multiple amplification was possible.

Dr. Arnold's work and inspiration contributed more than anything else to the development of the vacuum tube. Arnold's perfectionism became something of a legend around Western Electric. His constant enthusiasm and genuine absorption in the problem of sound communication inspired the men who worked with him. As one of them, J. P. Maxfield, remarks today—"He was one of the best bosses I ever had. He spent half his time in the lab, working on the same problems the men were investigating. There wasn't one piece of equipment in the lab that he hadn't used himself."

In 1914, Dr. Arnold decided that electrical recording should be treated as a laboratory tool, something which might lead to further discoveries applicable to electrical communication. Working hand in hand with Arnold, but noted for another talent, was E. B. Craft, later vice-president in charge of development work. Arnold laid the broad basis of scientific research and Craft realized the practical application of the work. Craft's enthusiasm, and the general feeling around the laboratory that sound recording was important to research on sound communication, was beginning to produce results, when World War I broke out. War-time emergency work claimed the lab resources, and sound recording development was temporarily halted. However, the application of electronics to defense measures speeded research in the field of

sound. One result was the discovery of the Thelofide Cell by Theodore Case and E. I. Sponable. It was used first for secret signalling and, later, as the sound-reproducing cell in motion pictures until replaced by the photoelectric cell.

All methods of electrical communication were affected by war-time discoveries. Individual ingenuity gave way to highly organized group research. There was no time to be lost, so thousands of dollars poured into the laboratories to finance these gigantic operations. Broadcasting and public address systems were greatly affected by this emergency research.

In 1920 Western Electric picked up sound picture work once more. At this time loud-speaker development was hitting a new high. A 12-foot wooden horn was built on the roof of Western Electric's West Street offices, and all notables who sailed in or out of New York were greeted by the booming voice of someone at Western Electric. The system was not without its pitfalls. One mellow afternoon, as the showman Roxy came sailing home from Europe he was greeted too late by a blast that rocked the Palisades . . . "My God, he's gone by."

By 1922, Western Electric had produced a sound picture on the working of the 3-element vacuum tube. It was an animation, the rather stuffy ancestor of Mickey Mouse. The premiere was held in Yale's Woolsey Hall, New Haven, on October 27. The audience was composed largely of scientists, assembled to dedicate the University's new chemical building.

The sound had been taken down by an electric recording mechanism and preserved on phonograph record discs of conventional type. The reproducing system was electrical throughout, but synchronization was done by hand. The phonograph's motor was started first, and the projectionist operated his motor, slowing down or speeding up to match the film to sound. This was the first time electrically recorded and reproduced sound synchronized with a motion picture was presented outside the laboratory.

S. S. A. Watkins, an English-born and English-educated engineer with a penchant for folk-dancing, was assigned by the chief of the recording group, J. P. Maxfield, to direct the experimentation on sound films. Early in 1923 they called in H. M. Stoller to design a synchronizer and set up a studio in room 1109 at 463 West Street. The room was too cramped for both camera and actors, so on the roof adjoining they built a small cage for the camera which shot the set through a plate glass window. The problem of insulating the camera was thus solved in a unique fashion. They made several films using office talent. Maxfield appeared in one, along with C. R. Sawyer and a Miss Colsey, one of the secretaries, who sang. In one film made in May, 1923, Mr. Watkins carried the lead, in fact he was the whole show, speaking and playing a tin whistle. Other shorts of dancers, singers, gag men, followed. Pioneers in the industry, Edison, Thomas Watson, Berliner, visited the lab. What is probably the first industrial sound film ever made—a movie on Western Electric factory production—was shown at a banquet for telephone executives, in January, 1924.

Commercial recording turntables were not entirely suitable for this work so T. L. Dowey of Western Electric designed one. The electrical recording head, which carried the cutting stylus, had already been designed by H. C. Harrison and is still being used in its original form. A basic contribution was made by another Western Electric engineer, E. C. Wente, who developed the

high-quality condenser microphone, and brought the loud speaker to a point of development which later made sound pictures possible.

Maxfield's group continued to turn out sound film shorts using "real artists" instead of office talent. One in particular stood out, a cellist who got so hot under the lights that great drops of sweat rolled down his nose and twanged the cello string.

While Maxfield, Watkins and their associates were working out the problems of disc recording, other Western Electric engineers, particularly Donald MacKenzie and E. C. Wente, were carrying on experiments in recording on film.

This method has as long a history as disc recording. Alexander Graham Bell seems to have fathered both methods of recording. In 1879, Bell was able to transmit sound by talking along a beam of light reflected from a mirror. The mirror served as transmitter and the ray of light was comparable to a telephone wire's electric current. In 1880 Charles Edgar Fritts filed a patent application on the process of photographing sound on light-sensitive paper and later converting the record back into sound by means of a selenium cell. Eugene A. Lauste devised a sound-on-film method in 1912. In 1920, Dr. Charles A. Hoxie demonstrated in General Electric laboratories a sound-on-film device which had grown out of a photo-recorder developed by him for radio code-signals. In 1923, Lee DeForest demonstrated his Phonofilm. RCA's photo-phone system followed later.

Both disc recording and film recording for talking pictures were being advanced side-by-side, but the former had a processing technique going back 40 years or so, while the processing of film for sound was new. This was a controlling factor in the later decision to open up talking pictures for the public, using disc recording. It was foreseen that eventually both picture and sound would be on film, as they were in fact in the first news reels.

Disc recording is based on the same principles as those used in the design of a telephone. Sound waves are converted into electrical impulses, then amplified until they are powerful enough to vibrate the graver which chisels vibrations into the wax record. By a reverse process, the variations in the groove of the record are reconverted into electrical currents, passed into amplifiers, then on to the loudspeaker.

In the sound-on-film method, the original sounds are converted into electrical currents which vary a beam of light photographically on film. When the sound is reproduced, a photoelectric cell is used to convert the variations in the light beam as it passes through the "sound track" of the moving film, into electrical currents which in turn are changed into sound at the loudspeakers. Vacuum tube amplifiers are used in both processes to provide enough energy, since the energy of the voice and the output of a photoelectric cell are both very minute.

Compared with Edison's *kinetophone*, the talking picture machine developed by Western Electric was a "Modern Marvel." Its power and control illustrate the tremendous strides in this research made possible by the development of the condenser, microphone, the vacuum tube, and electrical recording and reproduction. First of all, there was the problem of synchronization, which Edison had handled by cords and pulleys. Western Electric engineers designed a synchronizer that would keep record and film in step, since they were both coupled in the projection

booth at opposite ends of the same motor. This was not as simple as it sounds, since the film jerked naturally as it ran and the phonograph couldn't jerk at all. Antivibrators were coupled to the machine to cut down on this added complication.

Shooting a sound movie controlled the synchronization to a great extent. Edison's actors recorded their voices into large horns, then acted out the scene before the cameras. They were used to talking among themselves while the cameras rolled. What they said was of little importance, since the audience heard only the phonograph. That is—until a party of deaf mutes strayed into an early theater and read the lips of the more colorful characters—and so, the Hays Office idea was born. When Edison was recording a quartet, each member recorded into a separate horn. With the introduction of the condensor microphone and the vacuum tube amplifier, actors were permitted freedom before the camera.

Reproduction was the keynote of the new successful sound pictures. It was no longer necessary to hide the phonograph behind the stage. The record could be played at the projection booth, synchronization controlled and the volume handled by amplification.

While the groundwork for sound pictures was being laid in the laboratories, the silent film progressed. No longer a trailer for vaudeville shows, the movies were a powerful branch of American entertainment. The primitive American film disappeared after the advent of Edwin S. Porter and David Wark Griffith.

One of Edison's cameramen, Porter introduced story editing and story continuity to the screen. For his first effort along this line, he pieced together a group of old stills to make a "story" film called *The Life of an American Fireman*, the teary tale of mother and child rescued from a burning building. Porter's most memorable picture was *The Great Train Robbery*. Successful showings of this film in nickelodeons convinced businessmen that moving pictures would eventually become profitable. Nickelodeons multiplied overnight, film distributing offices, known as "exchanges," grew up and the public responded to the industry.

D. W. Griffith was the second big name in early American movie history. He experimented with camera mobility, insisted upon editorial cutting to tell a story instead of relying on simple chronology, and used the close-up, cross-cut and flash-back again and again.

American movies also owed much to the outbreak of World War I. During the war years, American film techniques improved, feature-length pictures were accepted, and the industry became installed in California. Opulent sets, star stables, fabulous salaries, publicity bureaus, beauty contests, glittering night clubs, all the glamour and legend of Hollywood sprang up during "the roaring twenties" that followed the war. This was the quarter-century that produced "Mary, Charley and Doug," Theda Bara, Tom Mix, "Fatty" Arbuckle, Maurice Costello, Mabel Normand, Mae Marsh, Norma and Constance Talmadge, Slim Summerville, Charles Ray, Pearl White, the Gish sisters, Francis X. Bushman, and William S. Hart . . . stars of the silent screen. Hollywood itself became a national byword. It was the place where they roped off the streets and hosed them down to shoot an accident scene, where armies of extras marched down Hollywood Boulevard behind the camera. It was the place where your salary might soar from \$3 a day to \$3,000 a week if a producer spotted you behind the hatcheck stand.

Consolidation of film companies took place during these postwar years. Early amateur days were over, and Hollywood readied itself to operate a business that was big in money as well as showmanship. Mammoth theater palaces shot up. Exhibitors poured their money into bigger and bigger electric signs, spectacular flashers, richly-carpeted foyers, elaborate lounges, expensive organs and all the saturnalian decor that a luxury-mad public wanted with the thrills, the fun, the pathos and escape provided by lavish film productions of the era.

As the competition for the public's entertainment dollar grew keener, exhibitors added elaborate stage presentations to their film programs: dance teams, singers, 75-piece orchestras, ballets and expensive stage sets. The theory was: if the picture won't pull 'em in, the comedian, the community singing, the organist or the orchestra will.

It looked as though the "feature" film might cease to be the feature, that it might be out-glamorized by the trappings that surrounded it. Thousands of smaller houses, unable to survive this costly competition, were faced with the alternative of closing their doors or paying less for their film productions. In either case, the result would have been tragic for Hollywood's producers.

Suddenly, in 1926, the spotlight swung back again on the film. The trappings were forgotten, for there arrived a newer, even more thrilling entertainment for the public—the screen had begun to speak. The long chain of scientific experiment with sound film, which had been progressing quietly while silent films had reached their zenith, now bore fruit. A fabulous industry which might have crashed under the weight of its own impedimenta was saved—and in the nick of time. Had the commercial introduction of sound movies been delayed until after the stock market crash of October, 1929, there is no telling how much longer the industry might have struggled in the depths of depression than it did. The initial effort to launch sound movies on a wide commercial scale was hard enough to finance, even in 1926, when business was good, as we shall presently see. But to find dollars to back such a tenuous venture during the Great Depression would have been impossible, and sound movies might have remained out of the public's reach perhaps for another decade.

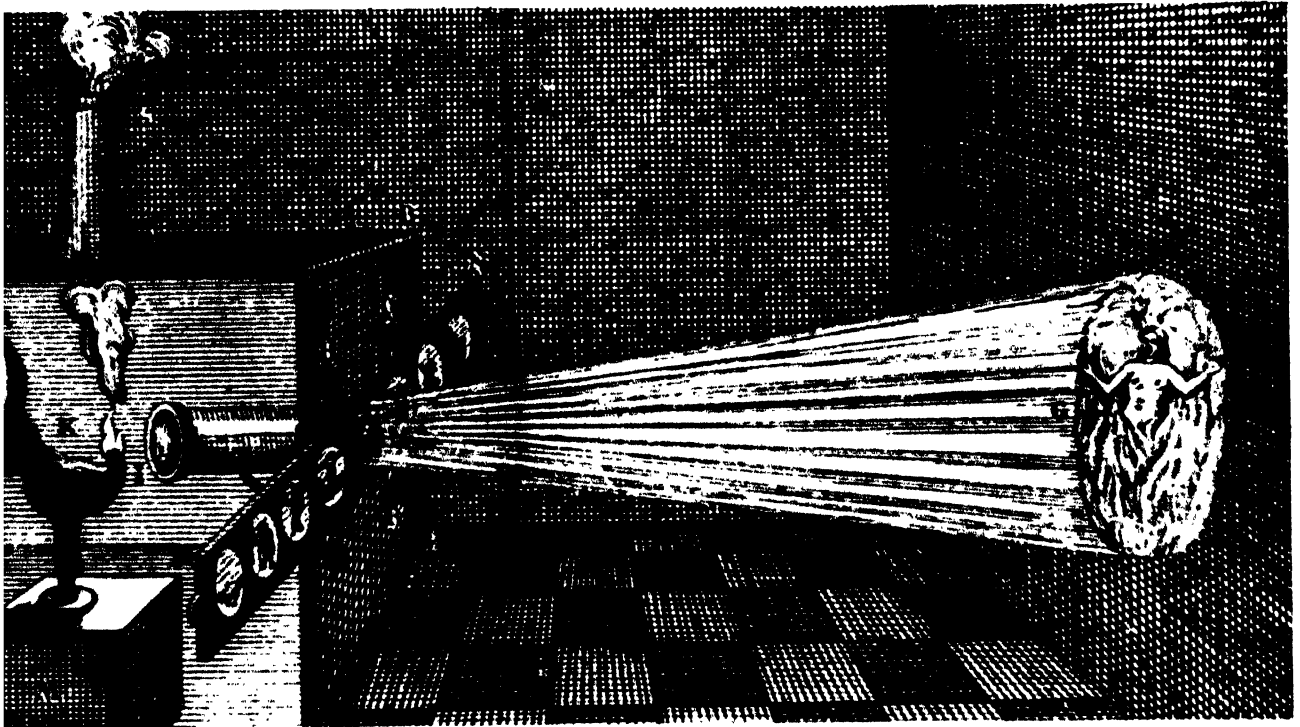
The sound picture had actually *existed* for 37 years, yet the early offerings of it to the public had met with scorn. We have seen with what ironic fate the man who invented it had himself delayed its adoption in earlier years, and how that delay, equally ironic, may have saved it for later public acceptance.

Later, we shall examine another curious twist of history, in which those who stood to gain most from adopting the sound film stubbornly refused to try it, and a small group of producers, the Warner Brothers, braved the scorn of critics and the loan-calls of bankers, to risk everything they owned in a practical test of their faith in the future of sound motion pictures.

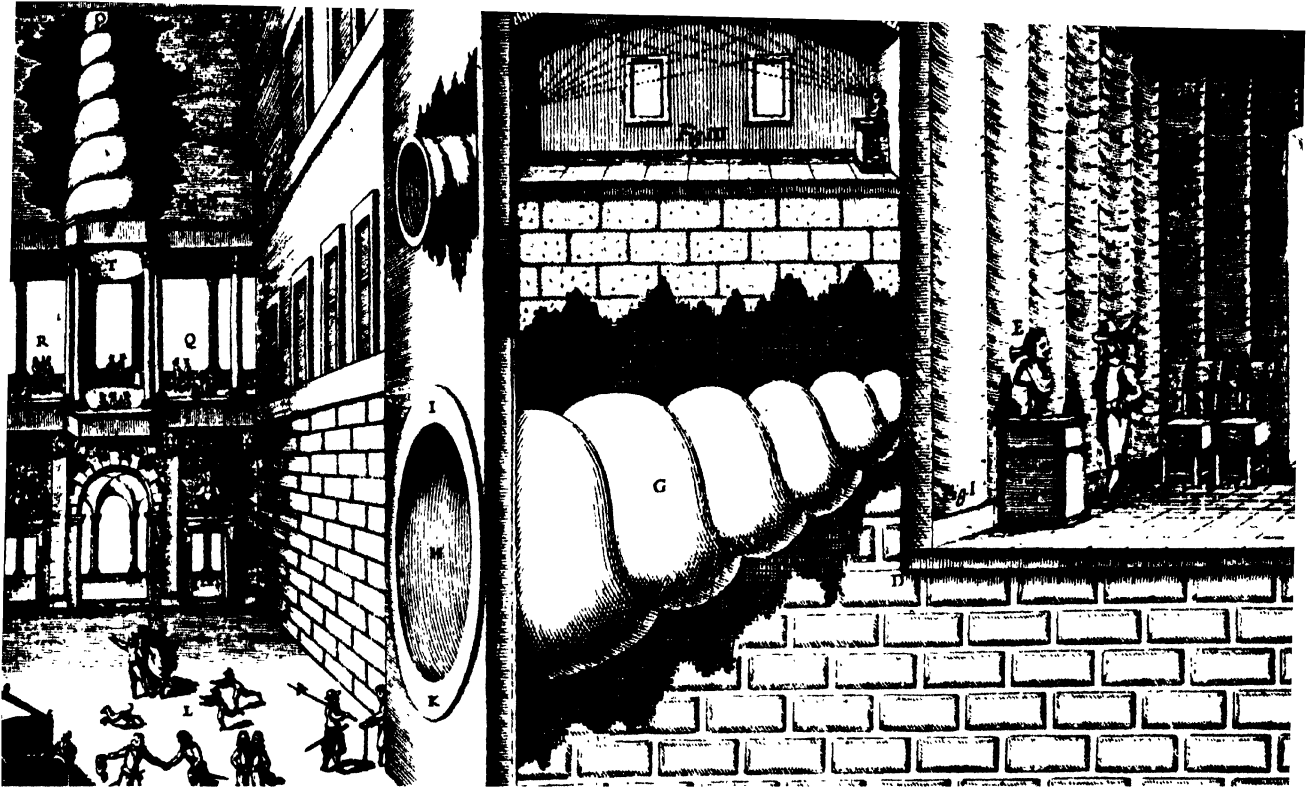
The sound motion picture, after 37 years of refinement from its development in 1889, was about to burst upon the nation's screen in 1927, but the scientific and artistic principles behind it went back to the dawn of history. Behind the flickering, talking screen lay centuries of experimentation with sound and motion. A combination of the two was inevitable and the sound movie accomplished what men had attempted since the beginning of recorded history.



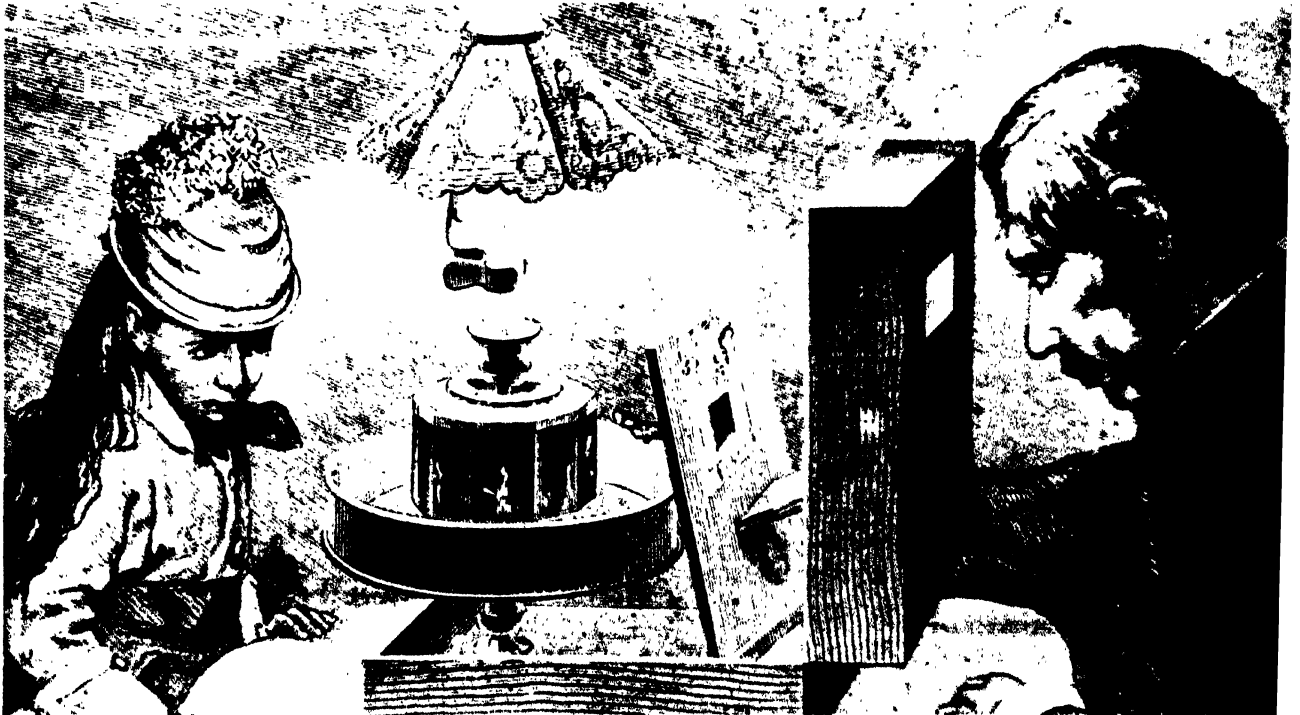
Perhaps the first artist to achieve the illusion of a moving picture was the primitive man who drew this boar with legs "in motion" on the walls of a cave in Altamira, Spain.



"Movie" projection in 1640. Kircher's *Magia Catoptrica* employed an oil lamp, reflector and lens. This early artist's conception of the Jesuit scientist's device contains an obvious slip. The slides would have had to be upside down, in order to project the heroine upright.



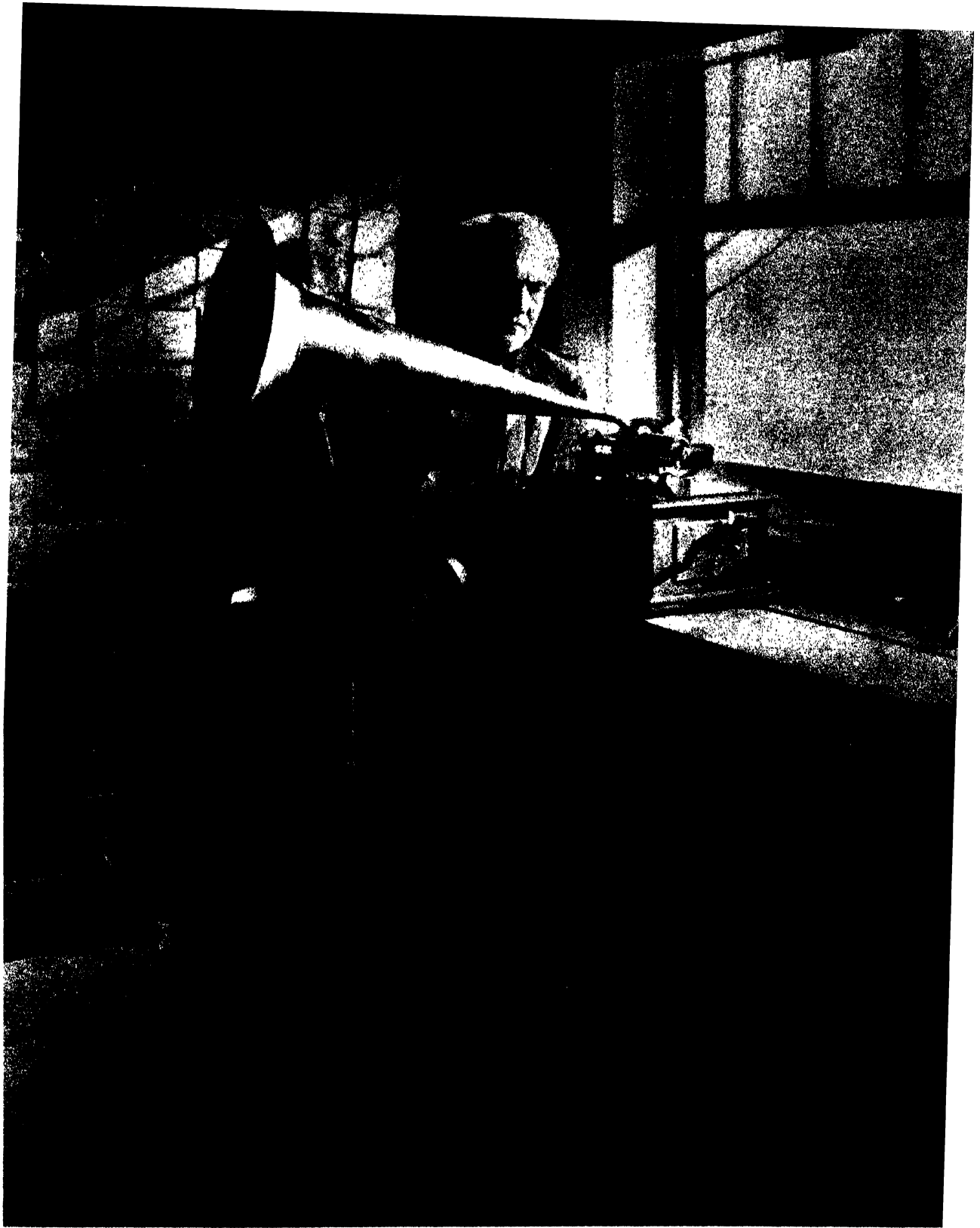
Kircher also worked with sound reproduction and designed a crude broadcasting system. Giant tubes built in the wall carried sound to a speaker camouflaged as a piece of statuary.



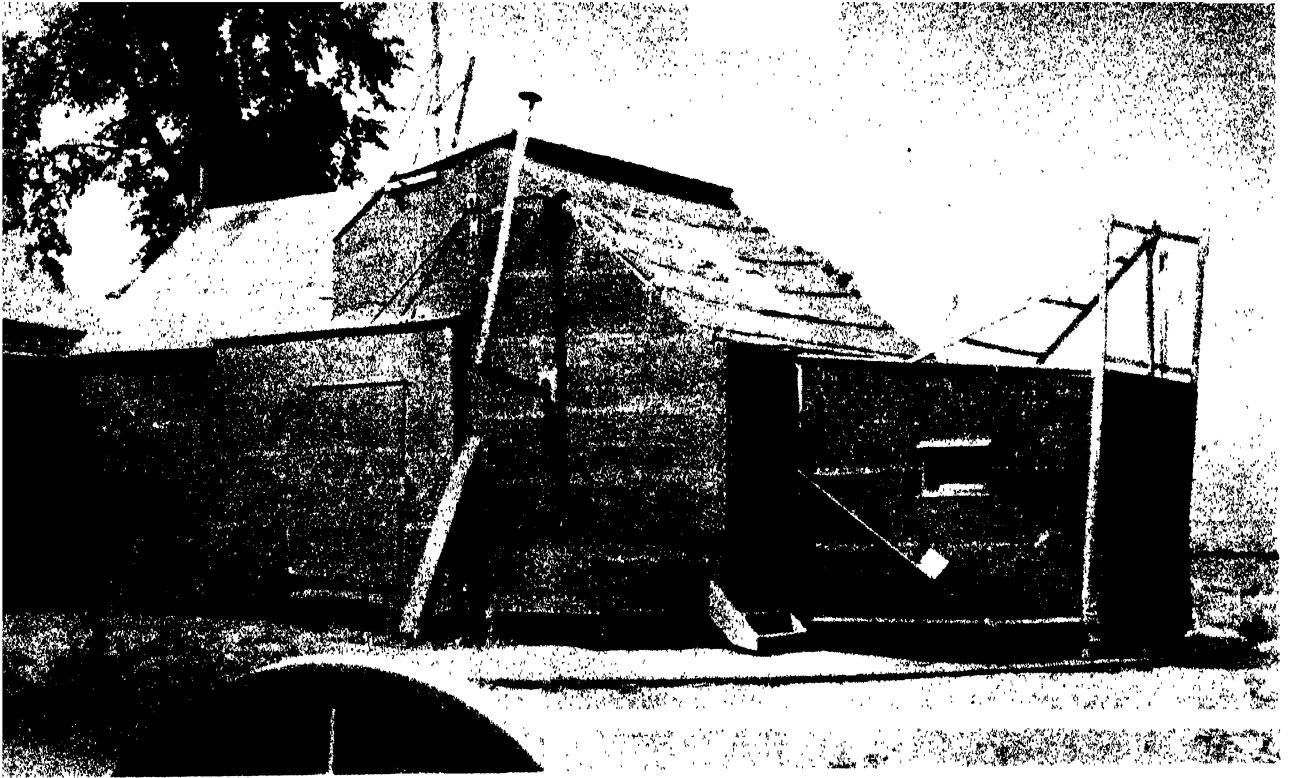
Early development in moving pictures and sound transmission progressed together. This device, an outgrowth of the Zoetrope or "wheel of life," delighted 19th century "audiences" by achieving motion when the operator twirled the wheel and viewed the slides through a glass.



Edward Muybridge's photographs of horses in motion are the acknowledged ancestor of modern moving pictures. Hired by Governor Leland Stanford, of California, to prove photographically that horses lift all four feet off the ground at certain gaits, Muybridge managed to take about four good pictures. Only one proved what the governor wanted it to, but it gave him the idea of shooting race horses with a battery of cameras. A young engineer named John D. Isaacs worked out the problem of setting off the cameras by electrical control instead of strings. Wires were stretched across the race track, steel wheels of the racing sulkies closed the circuits and magnetic releases set off the cameras. Muybridge operated this device on a generous expense account provided by Stanford until 1881. He became something of a celebrity and exhibited his "moving pictures" of animals and people both here and abroad. Legend has it that Muybridge visited Edison in 1886 with talking pictures in mind. While experiments in motion were being carried on at Palo Alto, "the wizard of Menlo Park" had invented his phonograph. Whether Muybridge did have talking pictures in mind or not, when he made his trip to New Jersey and the Edison laboratory, is still a moot point. It was certainly the next step in sound-motion development. Edison admitted seeing Muybridge's California photographs that day, but insisted that "nothing was said about the phonograph."



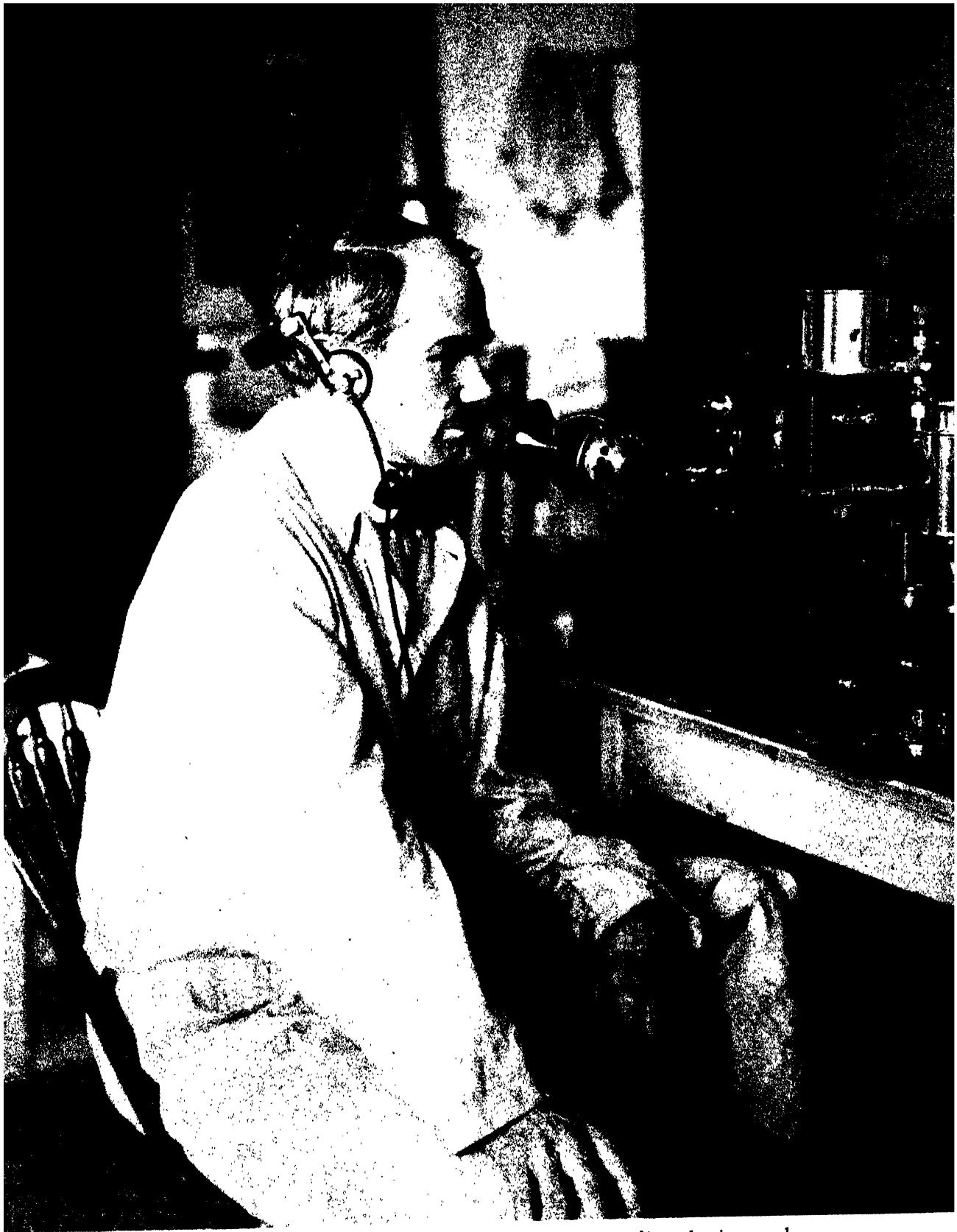
Perhaps he was laying his own plans which would bear fruit just three years later in the *kinetophone*. But in 1886 Edison was busily improving the quality of his phonograph.



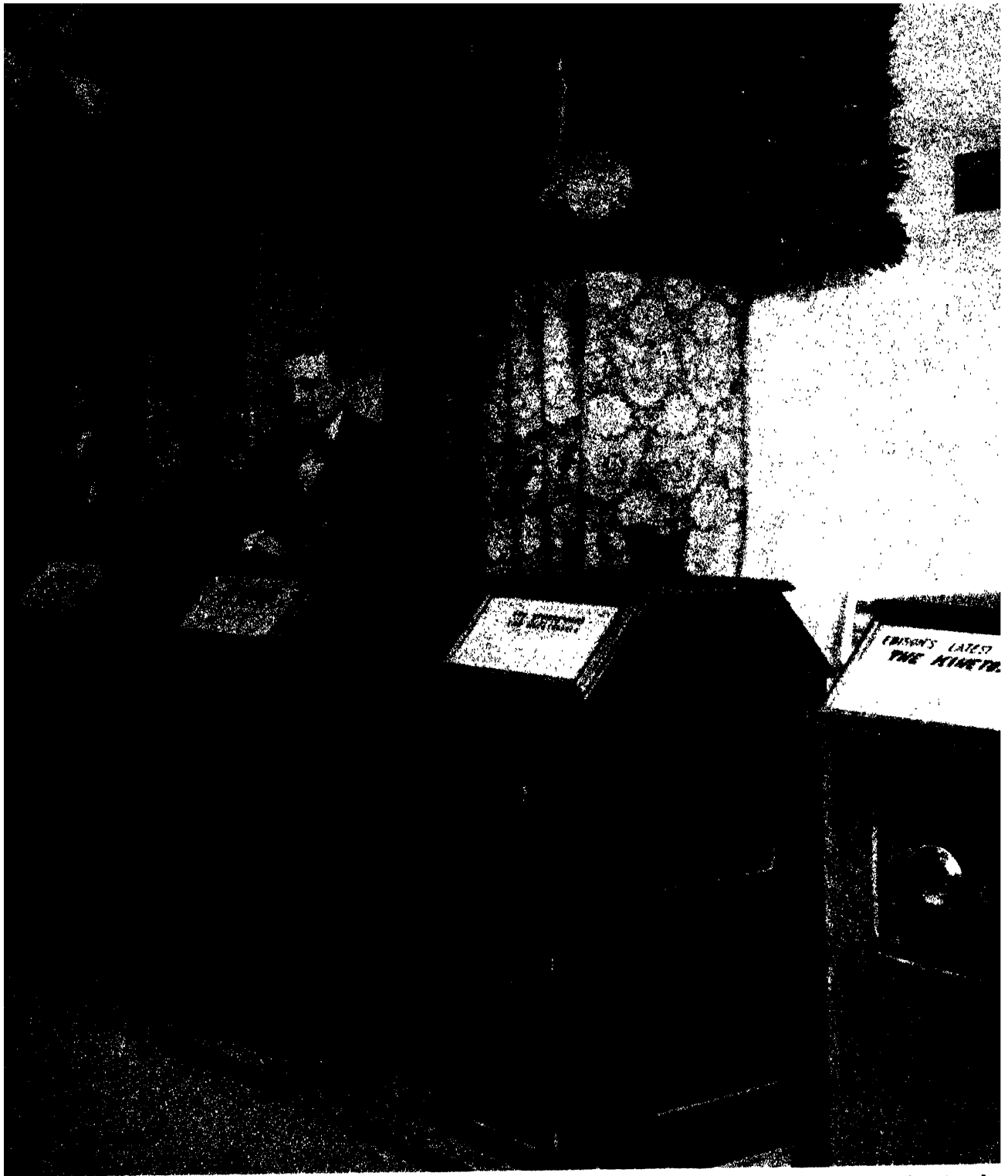
Here is Edison's Black Maria, where motion was caught by the camera and preserved by film.



Sound vibration, recorded through individual horns, was later captured on wax and amplified



by the audion, invented by Lee DeForest, seated at the radio-telephone above.



As soon as Edison's Kinetoscope was released to the public on April 14, 1894, it did a land-office business. The eternal passion for motion was satisfied by these awkward, unrealistic movies. At first, the Kinetoscope parlors were staffed with attendants who switched on the machine as soon as a customer deposited his 25¢. Soon the resourceful Edison patented a nickelodeon attachment into which you simply dropped a nickel and the film unreeled.



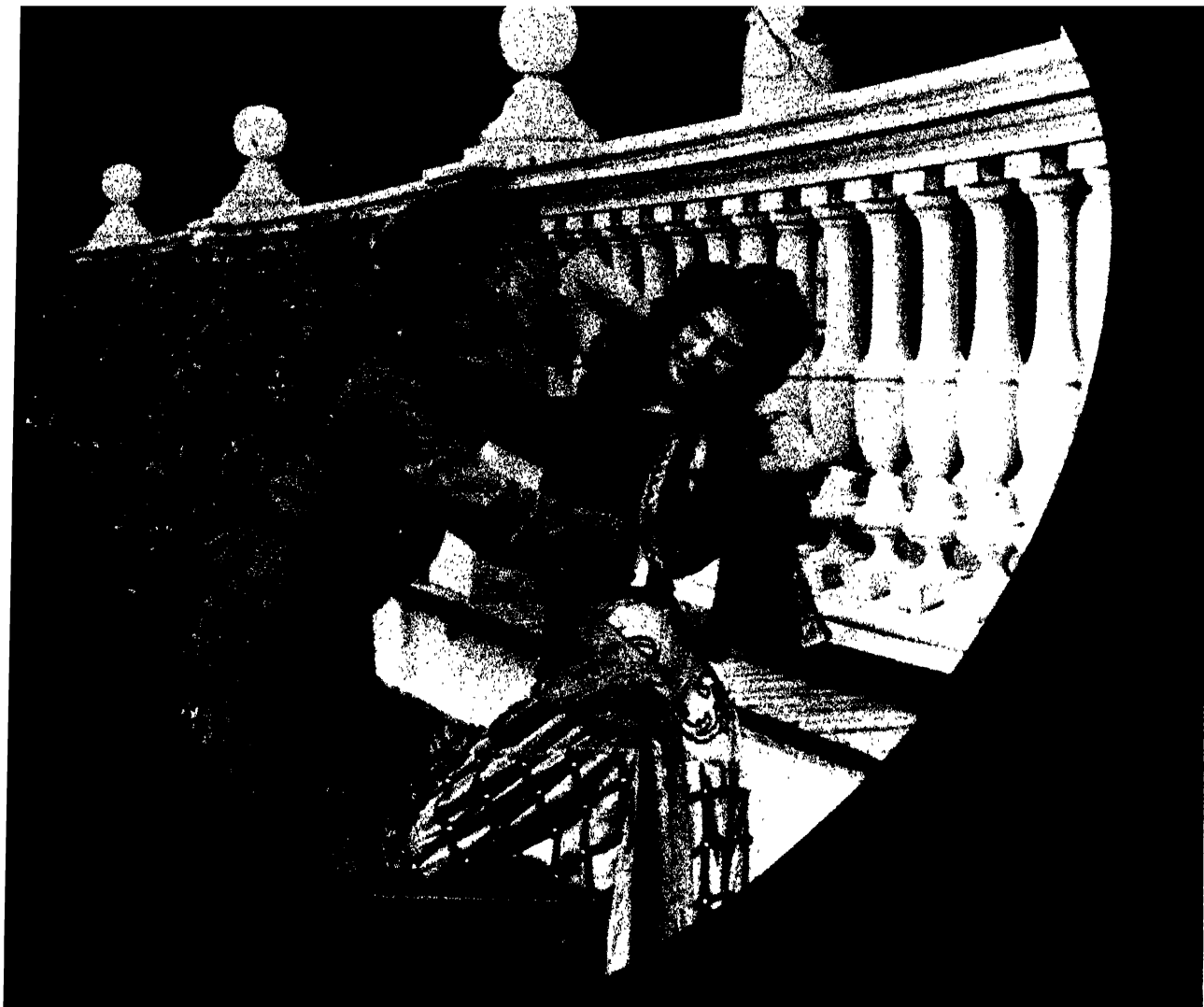
A competing device, the Mutoscope, offered 50 feet of bedroom farce, slapstick comedy, dancing girls or the current animal act. Some of these early peep show movies were considered rather daring. But Edison's reputation lent an air of respectability to the darkened parlors. It was inevitable that the peep show would be eclipsed as soon as a means of projecting films was developed. Experimentation along these lines was paralleling Edison's work on peep shows.



It was literally a step from the peep show to the vaudeville house, and the mass audience of the latter was what attracted promoters to the possibilities of projected movies. To Edison the peep show was just a toy, but more commercially-minded men saw its money-making potentialities. Obviously the Kinetoscope parlors would not hold as many people as would the movies. The old magic lantern idea reappeared. A pair of ambitious boys from Virginia decided to project the Kinetoscope movies like stereopticon slides. Grey and Otway Latham had invaded Broadway in 1894 in search of a new enterprise in which to invest their talents and money. They met Edison and Dickson, and when they set up their own shop they took Dickson with them. Major Latham, father of the boys, designed the projector which he called the Pantoptikon. On May 20, 1895, the Lathams presented the first projected motion picture on the screen. The Lathams proved it could be done, but inventors in many countries had been working on the idea. A year later, on April 23, Edison presented his Vitascope in Koster and Bial's Music Hall. The type of picture had not changed much from peep show days.



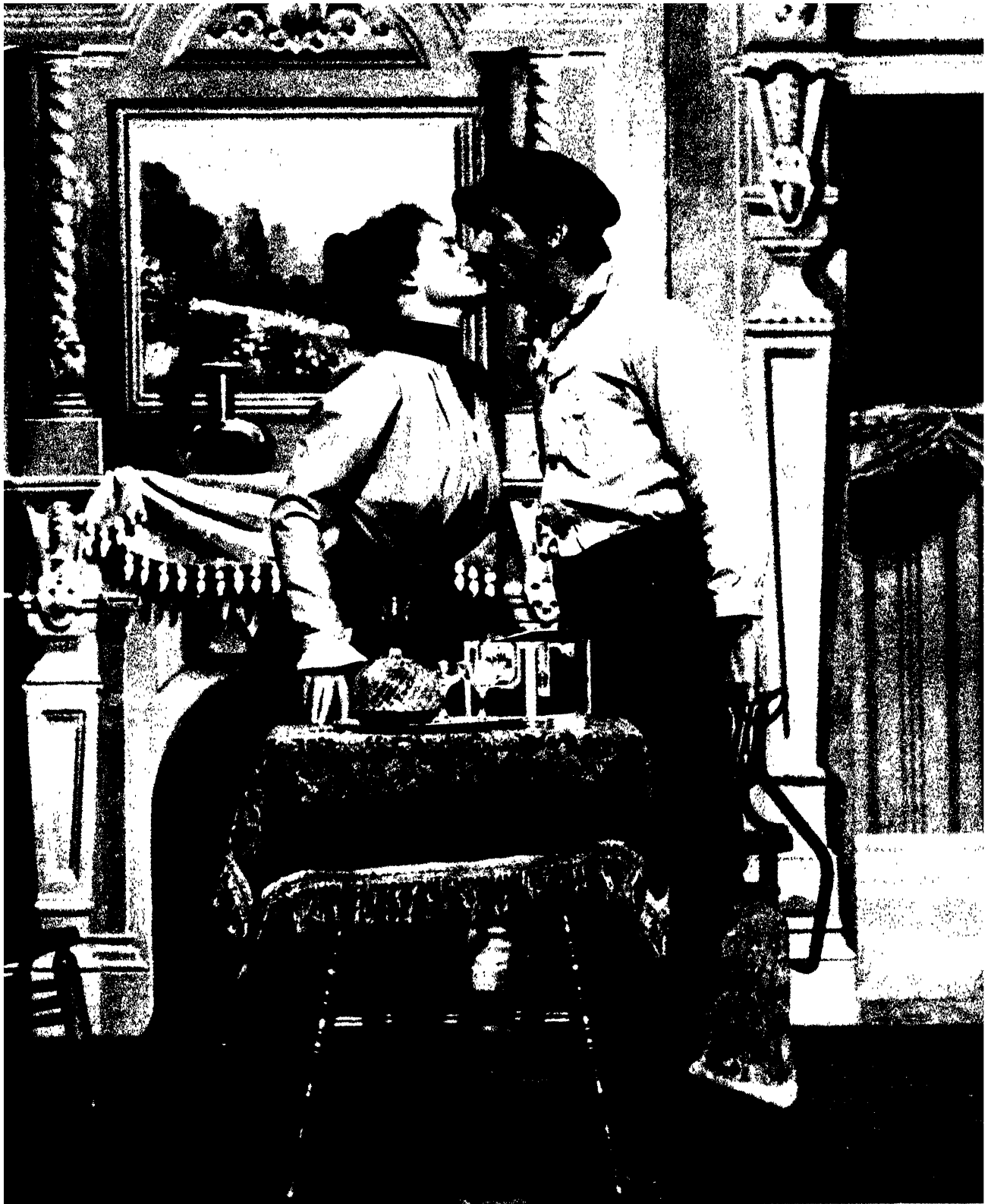
Audiences still demanded red-blooded human drama and tense situations such as this one from Edison's production, *The Magic Skin*. The Biograph Company opened its career in movie history at Hammerstein's Olympia Music Hall during 1896. They picked a sure-fire hit for the premiere called *The Empire State Express*, which was so realistic that front-row audiences ran for their lives when the locomotive came pounding down the track. One of the favorite subjects of peep show movies—and later projected pictures—was the prize fight. The Corbett-Fitzsimmons bout on March 17, 1897, was photographed out of doors, and the Jeffries-Sharkey battle of 1899 was shot under arc lamps. Films expanded in length and there were several filmed before 1903 which ran over a thousand feet. The tendency was to keep them short because of the strain on the audience. Few men appreciated the story-telling power of the screen and cared to experiment with it. The magical fairy tales created by Melies and shown around the turn of the century were enthusiastically received by vaudeville audiences. These imaginative films were to influence the technique and content of movies for years to come.



Slides to illustrate sentimental songs were cut into hearts and flowers, projected on the screen as audiences sang while the projectionist changed reels.



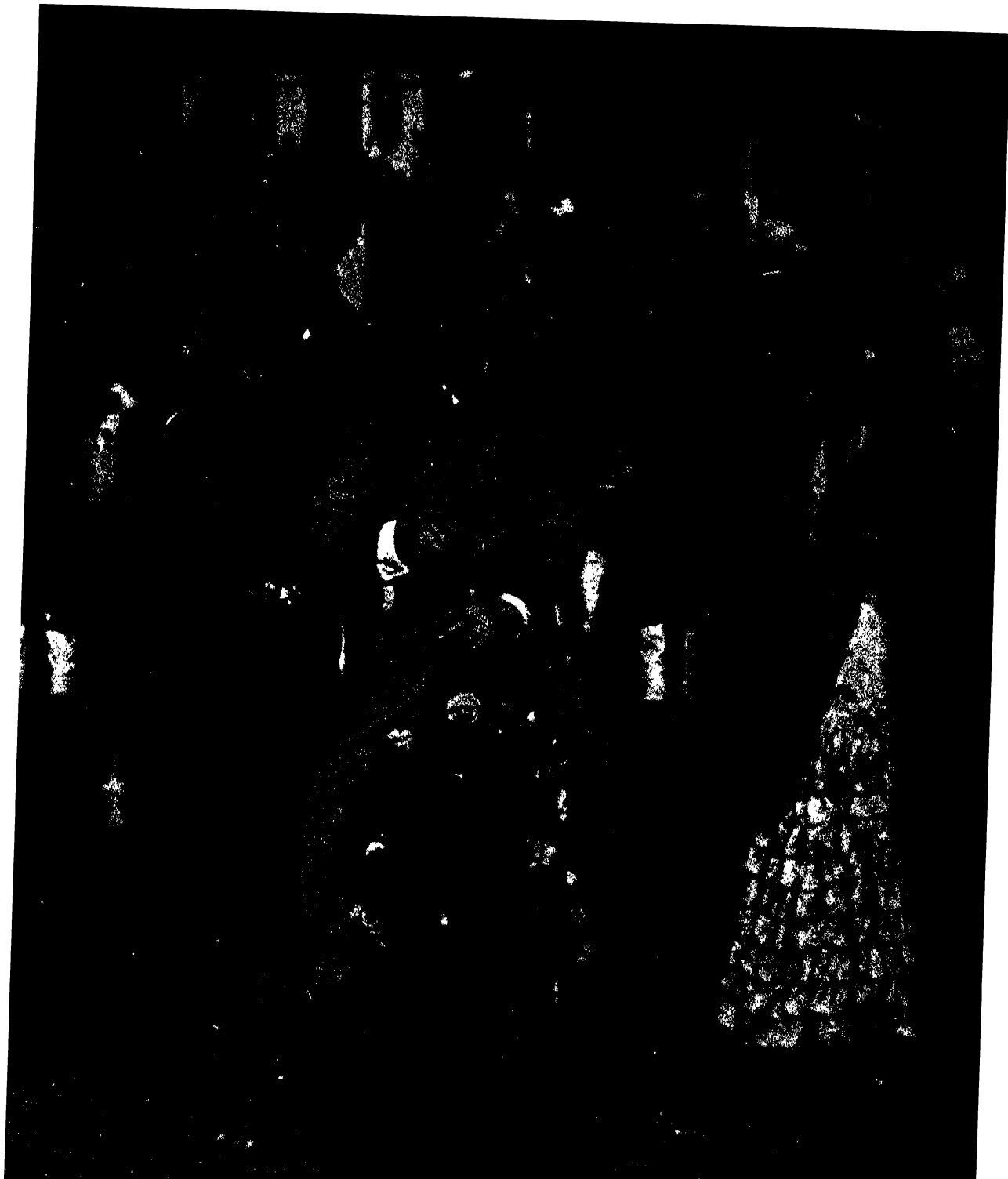
Audiences obeyed these between-reel slides, but not without a great deal of whistling, catcalls and stomping of feet. One engaging exhortation was: "Don't spit on the floor." The cartoon flavor of these blurbs may be traced in later animations.



Current situations, domestic entanglements, family jokes, and American catch-words all became grist for the mill. Here the iceman steals a kiss from the lady of the house. You can bet that her husband is just about ready to round the corner and surprise the pair.



D. W. Griffith's spectacle, *The Birth of a Nation*, played to packed houses during the war years, set new standards of film artistry and demonstrated the power and flexibility of the screen. It marked a milestone in silent film history, and later, movies felt its influence. Based on Thomas Dixon's novel, *The Clansman*, this story of the Civil War offered plenty of scope for the camera.



Crowds flocked to see it and paid regular stage prices for the privilege. *The Birth of a Nation* cost as much to make as was ordinarily spent on half a dozen features of that day. While Griffith had no sound film to work with, sound was not ignored, because a special orchestral score was played with the film.



The crowds that gathered on the White House lawn for Harding's inauguration, March 4, 1921, could not see the microphone concealed behind flowers on the portico, but they knew it was there. For the first time, the people heard as well as saw the ceremony of a President sworn into office. Amplifiers were hidden on the roof above, and Harding's speech carried far out over the heads of the crowd. This was the first time an outdoor public address system had been used with any success, but it was not the first bit of experimentation Western Electric had done on the problem. In 1916 they had set up a public address system capable of addressing 12,000 persons through 18 loudspeakers.



Loudspeakers were also used three years later when 113 of them were strung along New York's Victory Way. But the most significant step in this development was made at the presidential conventions of 1920. It was the first successful indoor use of a public address system. At the Republican convention (above) held in Chicago, the amplifying horns hung over the center of the auditorium and clustered above the speaker's rostrum. The same setup was used in San Francisco for the Democratic convention. Telephonic research would produce still more effective public address and broadcasting techniques. It would also contribute immeasurably to the sound picture whose successful development depended upon amplification.



World War I audiences saw the Kaiser's armies lampooned by such expert pie-throwers as Mack Sennett's gang. Ben Turpin, the ubiquitous cross-eyed comic, awaits trouble on the right.



Capitalizing on action in a slightly different form was the Western. It was just as fast-moving but a little more plot-conscious. Here is William S. Hart, idol of a generation ago, always quick on the draw. The Western bred another type of silent thriller—the serial.



Heroine of the serial heyday—in the *Perils of Pauline*—was Pearl White who here escapes from a fate worse than death in what appears to be an opium den.



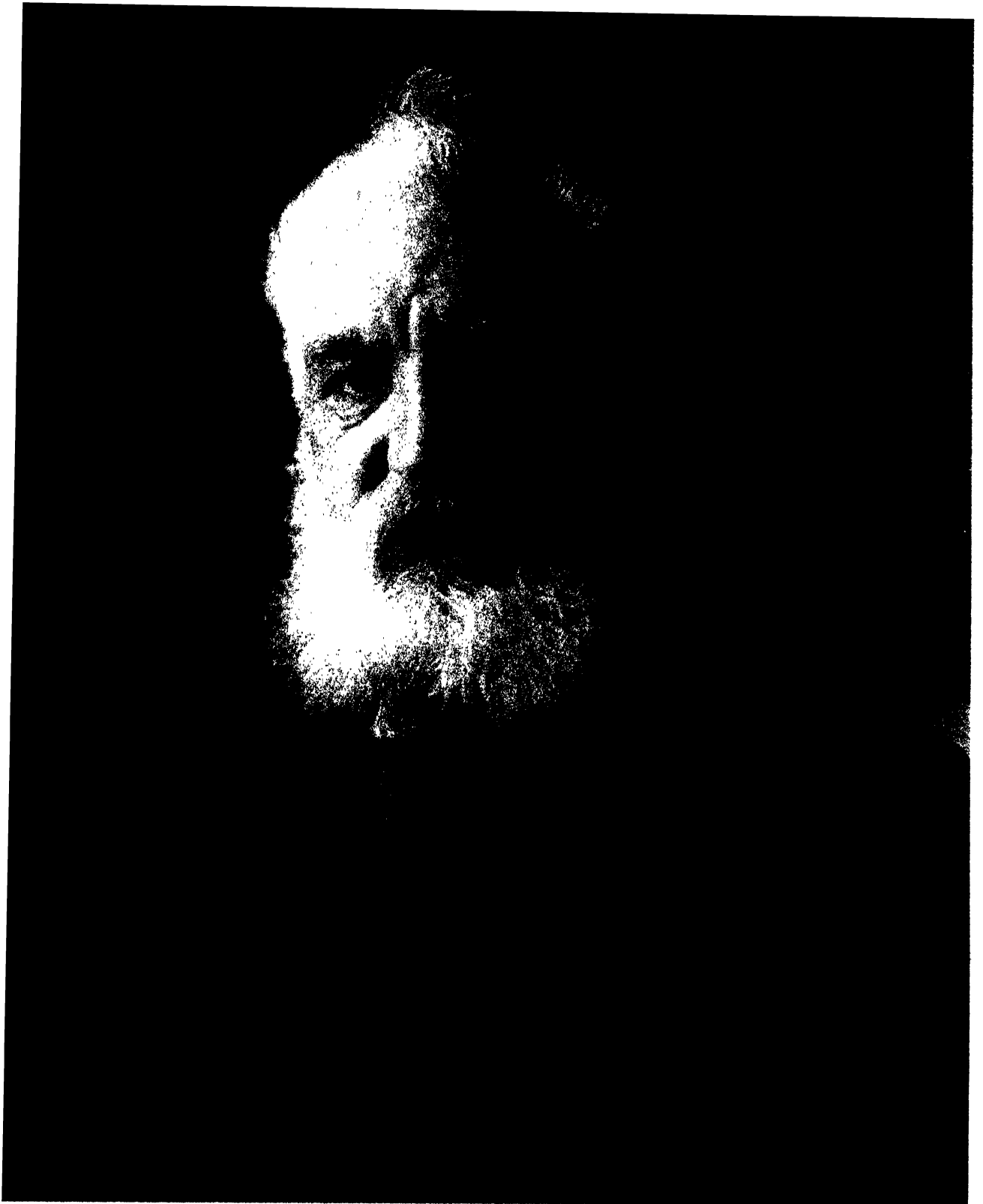
The innocent heroine of the serial was soon supplanted in public favor by the “vamp,” and the film gained in sophistication what it lost in simple morality. Billed as the “wickedest face in the world,” Theda Bara not only symbolized this new siren, she played her to the hilt.



The oldest gag in the world is demonstrated by Mack Sennett's Keystone Cops. Mabel Normand, who suffered at the hands of Mack Swain, Chester Conklin, Ben Turpin, Ford Sterling and the rest of the gang in reel after reel of "comedy," is here pinioned to a railroad track to be saved later in the nick of time. Mack Sennett started his career as an actor, in comedies with Mary Pickford. When D. W. Griffith, his director, turned a deaf ear to Sennett's ideas for comedy scenarios, Sennett left to start his own productions. Sennett was a master at dreaming up gag situations—the more absurd the better. If the heroine wasn't chained to a track, she was tied to a table facing a buzz-saw.



Publicity stills were almost as funny as straight comedy. Press agents posed their starlets with the great or near-great if possible. One tub-thumper let his imagination run wild and coyly captioned this picture: "Dan, Blanche Sweet's clever canine, is a motor enthusiast. With the dainty Pathe star as a companion, who can blame him?" Despite this ingenuousness among publicity men Hollywood studios took themselves seriously. The quality of films steadily improved and producers, writers and actors attained professional status. The nation warmed to rising young stars and gave them every opportunity to prove themselves. America's number one entertainment medium had achieved maturity.



In 1915 while audiences marveled at Griffith's brilliant silent films, 68-year-old Alexander Graham Bell could have safely predicted that within the next decade sound movies would "arrive." Bell's development of the wax disc and invention of the telephone fathered the talkies.



Upholding the standards of clean, young, American manhood against Latin charm were such actors as Richard Barthelmess. All was not passion and fire on the screen. Audiences demanded sweet, innocent, young love as well. But Barthelmess was more than a prototype of the boy next door. He was a fine actor who had worked with the masters of the silent screen. He got his first role in 1916, but it was not until D. W. Griffith's *Broken Blossoms*, produced in 1919, that his talent was discovered. The next year, he worked with Griffith again in *Way Down East*, a story which suited his type perfectly. As the rescuer of Lillian Gish, who had strayed from the straight and narrow path, Barthelmess played his way into the hearts of an adoring public. He left Griffith for the First National lot, in 1921, and made his new producer one of the most famous movies of all time—*Tol'able David*. Barthelmess was a big name in silent films who made the adjustment to sound easily and went on to greater popularity. When Warners acquired First National, he became one of their most valued stars.



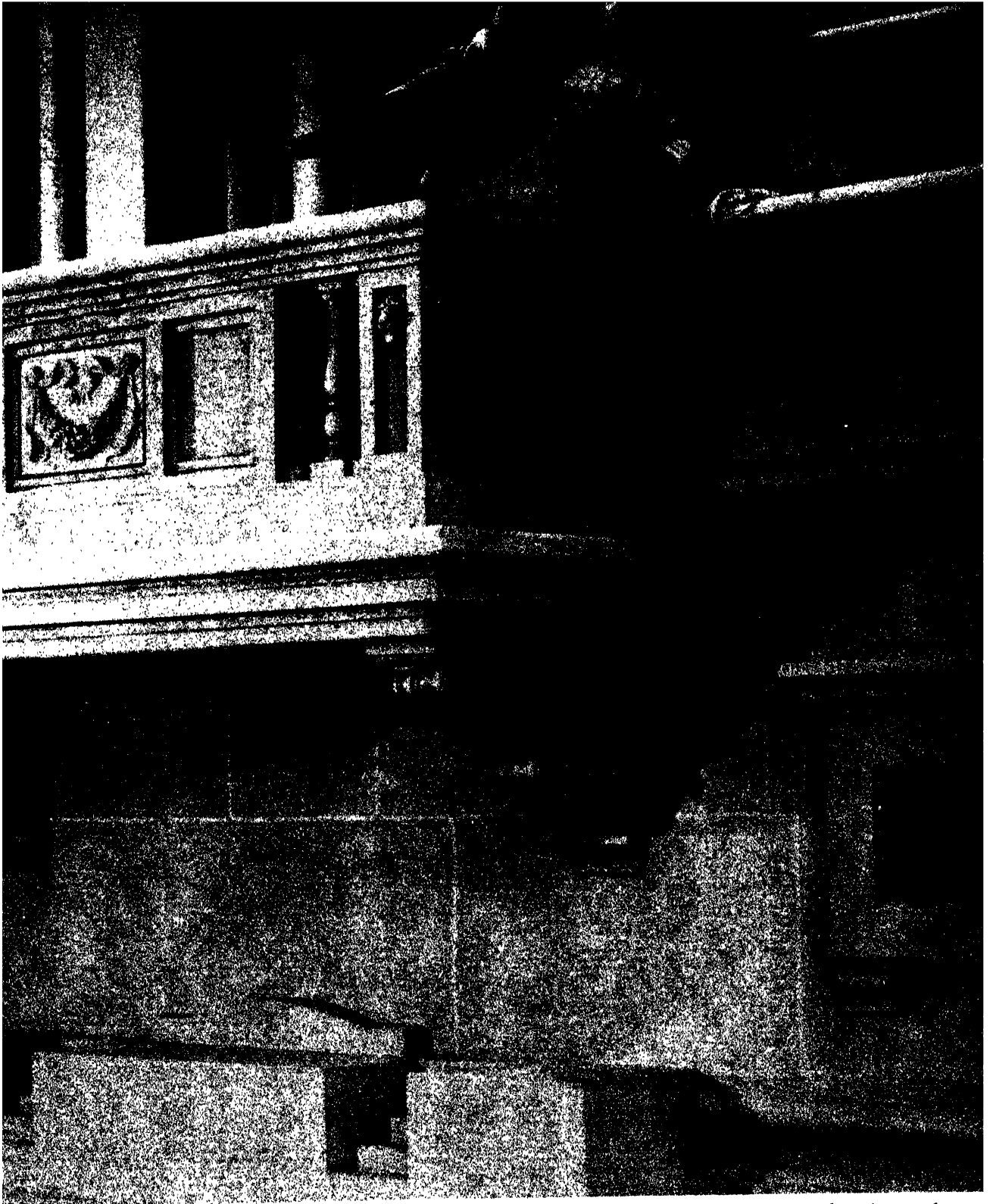
Mary Pickford began acting in 1908, was developed during her teens by D. W. Griffith and joined Zukor's Famous Players in 1913. With her corkscrew curls, naive charm and real acting ability "Our Mary" made sirens and glamour girls of the day look like also-rans. Her salary was astronomical for the era. The public loved her in *Rebecca of Sunnybrook Farm* (above), *Daddy Long Legs*, *Pollyanna*, *Little Lord Fauntleroy*, *Tess of the Storm Country*, and *Little Annie Rooney*. Not only was "Our Mary" a prolific actress, she was Hollywood's ambassador of good will. Liberty Loan drives of World War I invariably found her marching in the parade or haranguing apathetic Americans from the top of a soap box. The nation rejoiced when she picked the ebullient Doug Fairbanks to marry. "Doug and Mary" were the acclaimed king and queen of Hollywood. They more or less grew up with the industry and the crowns fitted easily. "America's Sweetheart" could have made no more appropriate marriage.



Fairbanks' acrobatics made him the most distinctive figure on the screen, and his personality made him the best liked actor of the era. He might well have ended up in the Keystone Comedies had someone not caught his infectious gaiety and toned it down a bit. Anita Loos, one of the brightest and most knowing of Hollywood writers, spotted Fairbanks as a natural. She manufactured a screen character which would not only exploit Fairbanks' natural charm but appeal to every American man, woman and child as well. In a series of deft satires, Fairbanks established himself as the American male released from the confines of a desk and set loose in the world to get ahead through pluck or luck. Fairbanks became a kind of secular Teddy Roosevelt with his "pep," aggressiveness and dazzling smile. These simple, witty movies gave Fairbanks his initial boost in the industry, but lavish costume pieces, like his 1924 production, *The Thief of Bagdad* (above), gave him immortality.



By 1925 the silent film was reaching its zenith. *The Big Parade*, made by MGM, did for World War I what *The Birth of a Nation* had done for the Civil War. The humor, pathos, romance and sharply realistic battle scenes of this lavish production won for it a 96-week run in New York and crowded road showings around the world. A special musical score was arranged for the picture in which the still-popular *My Buddy* was featured.



harmonic. It was a night filled with fate for a whole industry, and for four Warner brothers who held their breath awaiting the verdict. This was *their* hour—the culmination of struggle from the first days when their family set foot on the shores of America.



Four Men With Faith

TO BENJAMIN WARNER, America was Horatio Alger country when he and his family posed for their first portrait in the new, free land to which they had come, in 1888. Now, almost 60 years later, as his sons reflect upon their careers, there is nothing in their experience to dispute their father's early faith.

Today, however, as the Warners consider the road over which they travelled, it seems long, tortuous and often close to the abyss of disaster. It was largely their faith in the future of sound motion pictures that brought them to the position they hold today.

For when they poured their last resources into a win or lose gamble on the production of sound pictures, they were flying in the face of former failure by all the "best brains" of the motion picture industry. Edison's talkies had been scorned. Adolph Zukor and many others had turned a deaf ear to Lee DeForest's Phonofilm. William Fox had actually ordered Phonofilm installations removed from six theaters, in 1924, because the public had remained uninterested in early attempts at sound-on-film—even though 34 eastern theaters had been equipped to provide it as early as 1925. On the basis of its inferior quality at that time, many exhibitors as well as Fox had good reason to doubt the future of sound film.

Why did the Warner brothers stake their reputation on the uncertain future of sound pictures? Why did they gamble on something which had been turned down by nearly every motion picture company in Hollywood?

The answer lies in their background, which is characteristically American. The poverty, persecution and hardship which Benjamin Warner and his sons endured had bred a fighter's instinct, and a tremendous belief that America was the greatest country on earth.

The Warners have never forgotten the shadow of totalitarianism that drove them out of their native land. When a similar shadow threatened the United States, in 1941, Harry Warner testified before a Senate committee: "I believe I am the first generation in our family that has had an opportunity to live under freedom as I have. I would rather see my children, my family and myself dead than to live under any such system as the one Naziism is trying to get the world to live under."

Emigrating from Poland, where they had owned land for 300 years, the Warners settled in Baltimore. They did not find the streets of that city paved with gold, so nine-year-old Harry

began selling newspapers to help feed the family. Never one to take misfortune lying down, Benjamin Warner moved his family to Bluefield, W. Va., where he opened a general store. The store began to be a success, but just as he was getting on his feet, the main source of trade, a railroad construction gang, was transferred to Roanoke, Va. The Warners pulled up stakes again, moving to Detroit, then to London, Ontario. Their meager capital was lost in a fur venture. Probably the only bright incident of 1892 was Jack Warner's birth. Trying another trade, the enterprising Mr. Warner collected scrap-iron and brass, and traded with fur trappers. Leaving Canada soon after, they went to Lynchburg, Va., and set up a shoe repair shop. By the time he was 14, Harry decided to set up his own shoe repair shop. It was 1896, the year William McKinley was packing them into Canton, Ohio, for his front porch presidential campaign. Harry Warner figured that campaign visitors would use up a lot of shoe leather, so he bought himself a \$3 excursion ticket to Canton (which entitled him to two days in a straw-covered freight car).

He soon found that enterprise was not enough, business grew worse in Canton, so he decided to strike out for Youngstown, Ohio. Within two months, he had more work than he could handle, so he sent for his father. The Warners advertised, "Shoes repaired while you wait," and they made good their boast. They worked the 18-hour day and became a Youngstown institution.

Harry branched out, opening a bicycle rental and repair shop which Albert, 15, and Sam, 11, helped run. All the boys were showmen. Sam introduced and put over the first ice cream cone in Youngstown. Jack donned blackface and sang songs against illustrated slides in the Dome Theater and Grand Opera House of that city. The Warner boys stuck together, the way their father told them to do, but each one developed an individual personality. Harry was the business man and nominal head of the family; Sam had the imagination plus a mechanical knack; Jack and Albert were born salesmen. It was an ideal team.

Harry, Albert and Sam left Youngstown around 1903. Harry worked in Kauffman's department store in Pittsburgh, and sold cider vinegar for Price and Lucas. Albert sold soap for Swift, while Sam worked as a fireman on the Erie Railroad.

Packing houses and the railroads were booming, but there was another industrial giant just ready to be born—the motion picture business, and the Warner brothers already felt its fascination. Sam became so intrigued by his first glimpse of the Edison Kinetoscope, that he traded his services as handy man for a lesson in projection and was soon hired as assistant projectionist at \$8 a week. The Warner restlessness began to come out in Sam. For \$150 he could buy a projection outfit, some posters, song slides, and a print of *The Great Train Robbery*. Benjamin Warner was a little wary of the flyer. "If it was any good he wouldn't be selling it," he pointed out. But he pawned his watch to put up the capital.

Sam barnstormed the surrounding towns, with Albert to help him. In 1906 they got their first theater, a converted store in New Castle, Pa. The Cascade had a seating capacity of 99, but on days when the local undertaker commandeered his borrowed folding chairs, they had to close up shop. The entire family was sold on the motion picture by this time. Jack sang illustrated songs and sister Rose accompanied him on the piano—but not until she had sold out

the house at the ticket booth. Harry, who was still in business in Pittsburgh, was booking agent for the firm. He rented the reels for \$15 plus a \$100 deposit. After carefully investigating the wholesale distribution of films, Harry decided that the brothers should essay that end of the business.

Harry's uncle-in-law, in New York on a business trip, bought a trunkful of film so that the Warners could supply their own theater and set up a film-rental exchange. This \$400 worth of film was the backlog for Duquesne Amusement Supply Co., Inc., formed by the Warner brothers. Supplying film proved as profitable as exhibiting it, so they opened branches in Norfolk, Va., and Baltimore, Md. The Warners were riding high. Sam and Jack startled Youngstown citizens when they drove home in the first white Buick roadster in town.

The leading producers of the film industry had pooled their patents in the Motion Picture Patents Company and set up a distribution subsidiary called General Film Company. Regional distributors such as the Warner Brothers menaced their hold on distribution. Blocked by difficulties at every turn, the Warners finally gave up their license, in 1910. For a time, they tried running an "independent" exchange, but after several months, they gave that up, too. They were out of the film business, temporarily, but everyone who knew the Warner boys predicted that they would bounce back with a flourish.

The Warners were still convinced that America was the land of opportunity, but they were learning that under "free enterprise," if the other fellow had too much freedom, you had to have twice as much enterprise. But they didn't jump back into the fight right away. They took time off to observe the film business in New York and mull over what they had learned about public taste during the last ten years.

By September, 1912, their capital had gone into the Warner's Feature Film Company, and their first picture, done in a St. Louis studio by a free-lance production outfit, was completed. This film was the result of the Warner's careful calculation of public taste. It was a three-reeler called *Peril of the Plains*, described by Harry Warner in later years: "It was like *The Covered Wagon* except we used three wagons and they used 300." *Peril of the Plains* was a hit. The Warners were back in show business again. They produced a string of successes—*Raiders on the Mexican Border*, *Open Your Eyes*, *The Prima Donna's Husband*, *Are Passions Inherited?* The General Film Company's competition was still to be reckoned with. This time the Warners fought back. Even though they could have retained large salaries and five per cent of the profits under General Film's management, they still wanted to be on their own. However, they needed more capital, so they took in two partners, who later gained control of the company by buying 5,000 shares of stock which the Warners had given to one of their employees. Rather than see themselves snowed under, the Warners took the firm name as their only asset and withdrew. So, 1915 found them more experienced, but not much better off than they had been at the beginning of their career; in fact, less so.

They borrowed a couple of thousand dollars and started out once more in the motion picture distribution business. They played a close game until they recouped their standing in the motion picture industry. Then the old itch to make pictures as well as sell them broke out.

In 1916 they leased a small Hollywood studio, with Sam and Jack in charge. Albert continued to sell the pictures and Harry served as financier. The technique which distinguishes Warner pictures today was born in that little unpretentious studio. Every day Jack and Sam read the newspapers for possible film scripts. The idea was born out of necessity, of course, because Warner Brothers couldn't afford a stable of high-priced writers. But it gave them a sure clue to what interested the public and what would sell in picture form. The result was picture material which mirrored life, was honest and full of social impact. The first major film the Warner Brothers made came straight out of the news and hit the public between the eyes. The picture was *My Four Years in Germany* and the time was 1917.

Early in 1917, Jack and Sam read that U. S. Ambassador James W. Gerard had been signed to write a series of articles for *The Philadelphia Ledger* about his four years in Germany. The articles would later appear in book form. It was a tailor-made subject. The Ambassador had been ordered home from Berlin when the U. S. severed diplomatic relationships with Germany. It could mean only one thing—WAR!

Jack and Sam sold the idea to Harry, who was in New York, and he began negotiations for the screen rights. Shortly after the first installment appeared in the *Ledger*, Harry called on Gerard at his hotel.

"I want to make a motion picture of your book," he said.

"Why, you can't make a motion picture of a mere personal narrative," Gerard answered.

"Won't you let me try?" Harry asked.

"Go ahead if it amuses you," the Ambassador replied. But when he saw the script, Gerard admitted its picture possibilities and signed a contract.

They had won the first round, but what were they going to do for capital? The Warner Brothers made a deal with a New York financier who was willing to put up \$50,000 for 54% of the profit. The film was made in a Grantwood, N. J. studio. They shot most of it, but filled in with old newsreels to give the film added impact. Halbert Brown played Gerard and looked so much like him that filmgoers began to speak to the real Gerard on the street. The Warners did not produce a tabloid version of Gerard's book. It was restrained, factual and dramatic because of its tie-up with events of the day. First-nighters justified the Warners' faith in their film.

"*My Four Years in Germany* was received with an outburst of applause and cheering, unusual at such entertainments," the *Herald* said.

The Warners had only \$130,000 left from the profits after they had paid the financier. The distributor, First National, made \$300,000. But the Warner Brothers came out with some badly needed cash and a reputation. Now they could approach big-name directors and actors without fear of being rebuffed. Rising young stars were anxious to work on the Warner lot, where they could be intelligently developed. After the success of *My Four Years in Germany*, the Warners had arrived.

Perhaps the most famous silent star on the Warner lot was John Barrymore. Cautious Harry sat through 12 performances of Hamlet observing the "Great Profile." When he was finally satisfied, he offered Barrymore a contract. Paradoxically enough, after Barrymore, the

Warners prized Rin-Tin-Tin as their next leading star. Barrymore already was a public idol, and the dog soon became one. He was starred in *Where The North Begins*, *Find Your Man* and *The Lighthouse By The Sea*, among others. Hollywood was flooded with foreign stars and directors, and it was difficult to spot real artists among would-be "talent." With characteristically shrewd judgment, Jack picked Ernst Lubitsch, whose light touch made him one of Hollywood's most valued directors.

The diversified pattern of story material, which is still Warner policy, was set in those early days. They adapted best sellers for the screen—*Babbitt*, *Brass*, *Main Street*—and classics, *The Sea Beast (Moby Dick)* and *Lady Windermere's Fan*. But they also produced sophisticated comedies directed by Lubitsch—*Marriage Circle*, *Three Women*, *Kiss Me Again*, *So This Is Paris*. One of the most famous child stars of the day, Wesley Barry, was starred by Warners in *Printer's Devil*, *Rags to Riches*, *Little Heroes of the Streets*, *George Washington, Jr.* They filmed Belasco's *Tiger Rose*, *The Golddiggers*, *Deburau* and *Daddies*.

All the time Jack and Sam were turning out imaginative, well-made pictures in the company studio on Sunset Boulevard and learning production know-how, Harry and Albert were struggling with finances and sales.

The Warners raised capital by a "franchise-holder" distribution plan. Under this plan, franchise holders throughout the country agreed to take the company's entire output for wholesale distribution, giving Warners partial advance-payment when the contract was signed and the rest on delivery. These middlemen then leased pictures to theaters in their territories. Any profits made over and above this initial advance, and their distribution expenses, were divided with the Warners. The average company picture played more than 4,000 theaters. Harry and Albert handled the difficult job of franchise agreements. Albert had to be out on the road, constantly supervising distribution and exploitation of Warner pictures. Advance-payment reached important proportions by 1923. This flow of finances helped Jack and Sam budget for better pictures.

Dissatisfied with the franchise arrangement which had put Warners on its feet, but was not geared to the future he envisioned, Harry looked around for his own distribution outlets. Through financing by Harry and Waddill Catchings, now a director of the company, Warners increased its capital. Although it was still a family owned and operated company, shares were made available to the general public in 1925. Waddill Catchings had supplemented the proceeds derived from the sale of the stock by arranging a rotating credit for the company. In November, 1925, this was refunded. Now the company was in good shape, financially. Wall Street was sold on its future. Harry felt it was time to branch out and acquire the distribution outlets the company required, so he bought Vitagraph's film distribution offices which reached 6,000 theaters in the U. S. plus foreign outlets.

The Warner Brothers were firmly entrenched in the silent picture business. They had a solid foundation on which to build a great reputation. And Harry for one was reluctant to gamble any more. But gamble he did—on sound motion pictures.

But somebody had to sell the idea to Harry, Albert and Jack—and that somebody was

Sam, with the help of Colonel Nathan Levinson. The latter, then a Major, who was installing Warners' radio station in Hollywood, had just returned from New York where he had seen Western Electric's sound synchronized with film. He told Sam Warner the exciting news. Levinson later said he went straight to Sam Warner first, because Sam was the only man in Hollywood who would know what he was talking about. The industry had been approached time and again by Western Electric. But the big companies would never admit that sound had commercial possibilities. Sam's imagination was fired. He went to New York to see for himself, came back completely sold. The next step was to convince his brothers. He and Levinson arranged an innocent-looking party between Harry and Albert and Western Electric. The added, unannounced feature was a screening of some sound films.

Harry sat through the first number on the program, completely inscrutable. When an orchestra appeared and music filled the small projection room, Harry couldn't contain himself any longer. "That's the answer to sound pictures," he exclaimed. "No wonder this thing hasn't taken hold. It hasn't been done with showmanship. Think of it! Now we can bring fine music into small houses that can't afford orchestras. We can bring symphony and opera and great performers into every town in the land and in the world. Put the finest music by the best talent on that screen. By giving a voice to the screen, people from the four corners of the earth can be brought together through this visual and vocal medium. Educators will be able to teach their students. Medicine, arts and sciences will be taught from the talking screen."

The original hope that the sound motion picture would have international and educational impact, which was a motivating factor in the Warner development of sound on screen, is a demonstrable reality in the kindergartens, grade and high schools, and colleges of the United States and other countries. Both 16mm and 35mm sound films are being used so extensively that an educational revolution is now in progress. This advance, crystallized during the war when the sound motion picture became the most effective means of teaching in all branches of the services, has extended to all lines, from the exposition of surgical techniques, to the best methods of raising food, in fact, to all departments of living.

On June 25, 1925, an arrangement was concluded between Western Electric and Warners to develop sound motion pictures. A company had to be organized. They had no name for the project. Four hundred names were suggested and rejected. Finally, they settled on Vitaphone.

As soon as the contract was signed, Stanley Watkins, who had been head of Maxfield's experimental sound crew at Western Electric, took his men to the Vitagraph studio, in Brooklyn, and set up shop. Inside the big glass stages, they built a box 50 feet square and 30 feet high. This would be their new set, but it had to be sound-proofed. So the crew and Sam Warner, who during the next year and a half left the studio only to sleep, hung rugs over the walls of the box stage to insulate the place for sound. They were isolated in Flatbush from everything, except the subway. The Coney Island line of the BMT ran above the surface at that point—right past the studio windows. Every time a train passed, the recorder needle jumped in anguish.

Working conditions in Flatbush went from bad to worse. Eventually, Sam Warner leased the old Manhattan Opera House in New York City, and the studio became a boarded-over

orchestra pit, sound-proofed by cloth hung from the chandelier. The quality of the short subjects they were making improved and they tried more elaborate productions.

The films made in Flatbush and the old Manhattan Opera House were like silent motion pictures as far as the action went, but the sound was much more professional than anything produced so far. Sam felt that the pictures' life and action had been sacrificed to sound, so he experimented with the camera as well as the microphones. Sam, Watkins and the sound crew worked day and night. A year later they had something to show the public.

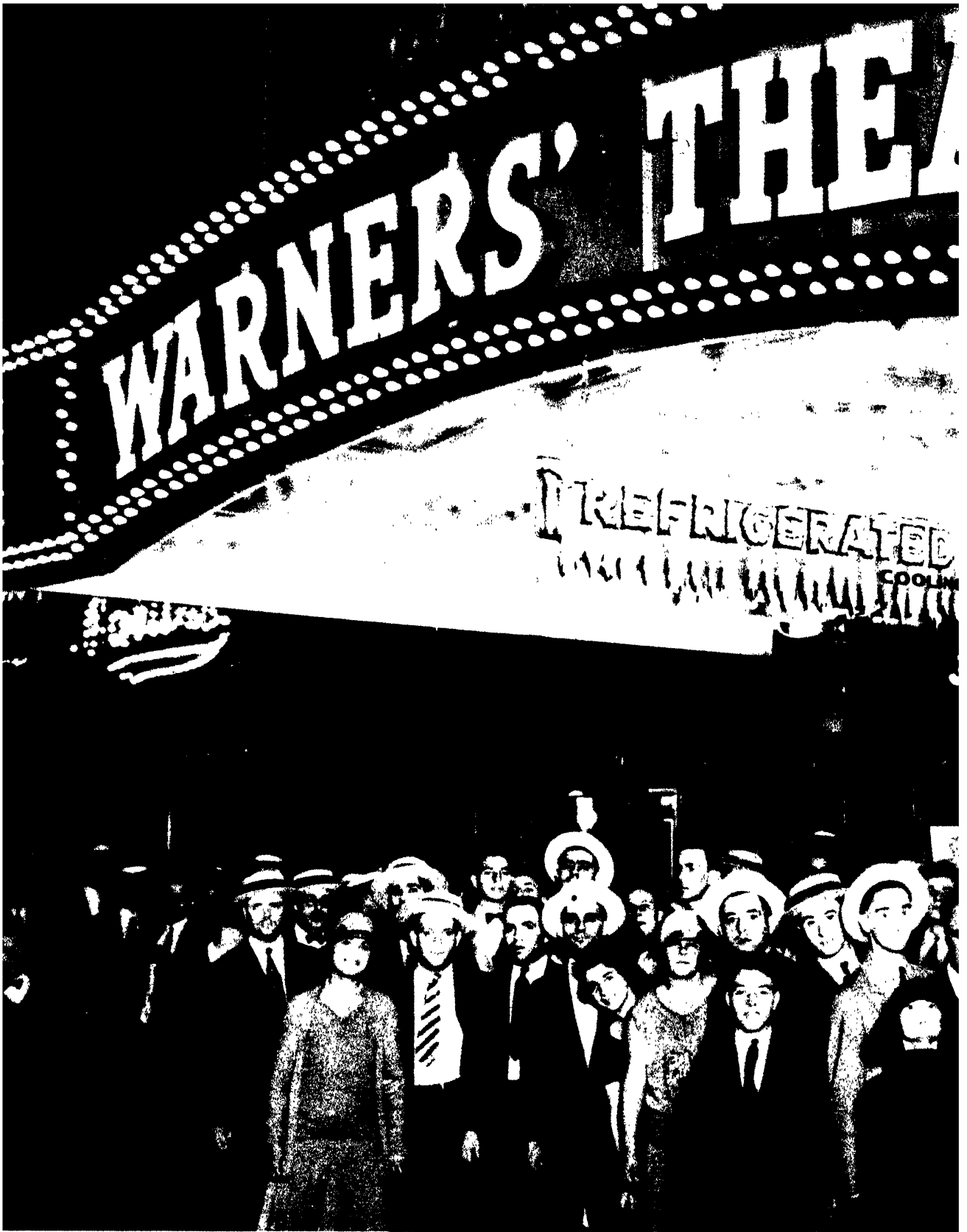
The other Warner brothers had stayed out of Sam's hair, producing silent pictures on schedule, consolidating their position in Hollywood. Jack Warner, with Darryl Zanuck and Bryan Foy, his two assistants, dropped in and substituted as actors for a day, and Harry and Albert were in touch with progress in the Opera House, but Sam and his crew were on their own. When Sam announced that he was ready to show the world what he had done the Warners got behind him as a team. "If it's worth doing at all, it's worth doing well," Harry said to his brothers in December, 1925. "Let's get the greatest artists and the best orchestra in the country. Let's have confidence in this and put all our muscle behind it. We will know the result after we have opened the first show."

The Warners planned to introduce the public to sound with Vitaphone shorts, featuring great artists of the day: Giovanni Martinelli, Mischa Elman, Efrem Zimbalist, Harold Bauer, Anna Case, Marion Talley and others—with an introductory speech, *from the film*, by Will Hays, *plus* their newest and best silent film, *Don Juan*, accompanied by a musical score written especially for the picture, recorded by the New York Philharmonic orchestra, directed by Prof. Henry Hadley and synchronized with the film.

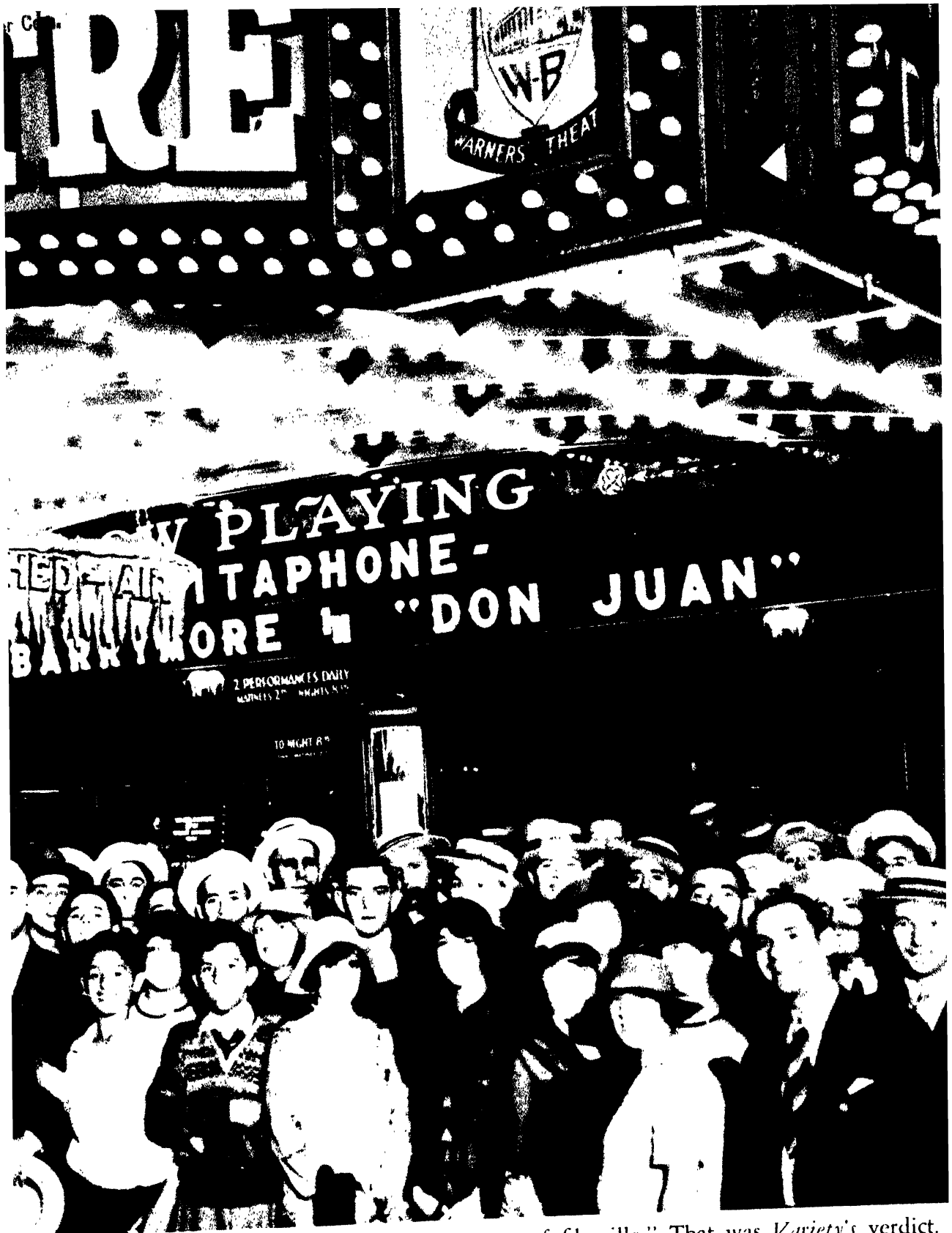
The premiere of sound would certainly lack for nothing in showmanship. *Don Juan* starring John Barrymore, was the most ambitious film the firm had made. Its release was held up until the symphony accompaniment could be recorded.

Herman Heller, musical director for the Warners, worked hard. Sam Warner, Watkins and the engineers had to train famous instrumentalists in the new technique of sound motion pictures. Mischa Elman would chin his violin, lean back and look at the top balcony. Patiently, Heller would explain that the camera would take care of that and his face would be in front of every member of the audience no matter where they sat. Again and again, Elman would say, "But I always look at someone in the top balcony when I give a concert."

The Warner Theater, on Broadway between 51st and 52nd Street, had been chosen for the world premiere. The theater was equipped, the shorts were ready, the score had been recorded and a skeptical public had been invited to witness Vitaphone on the evening of August 6, 1926. What would be their verdict?



"Vitaphone will get 'em—men, women and children. Warner Brothers have a double hit at the



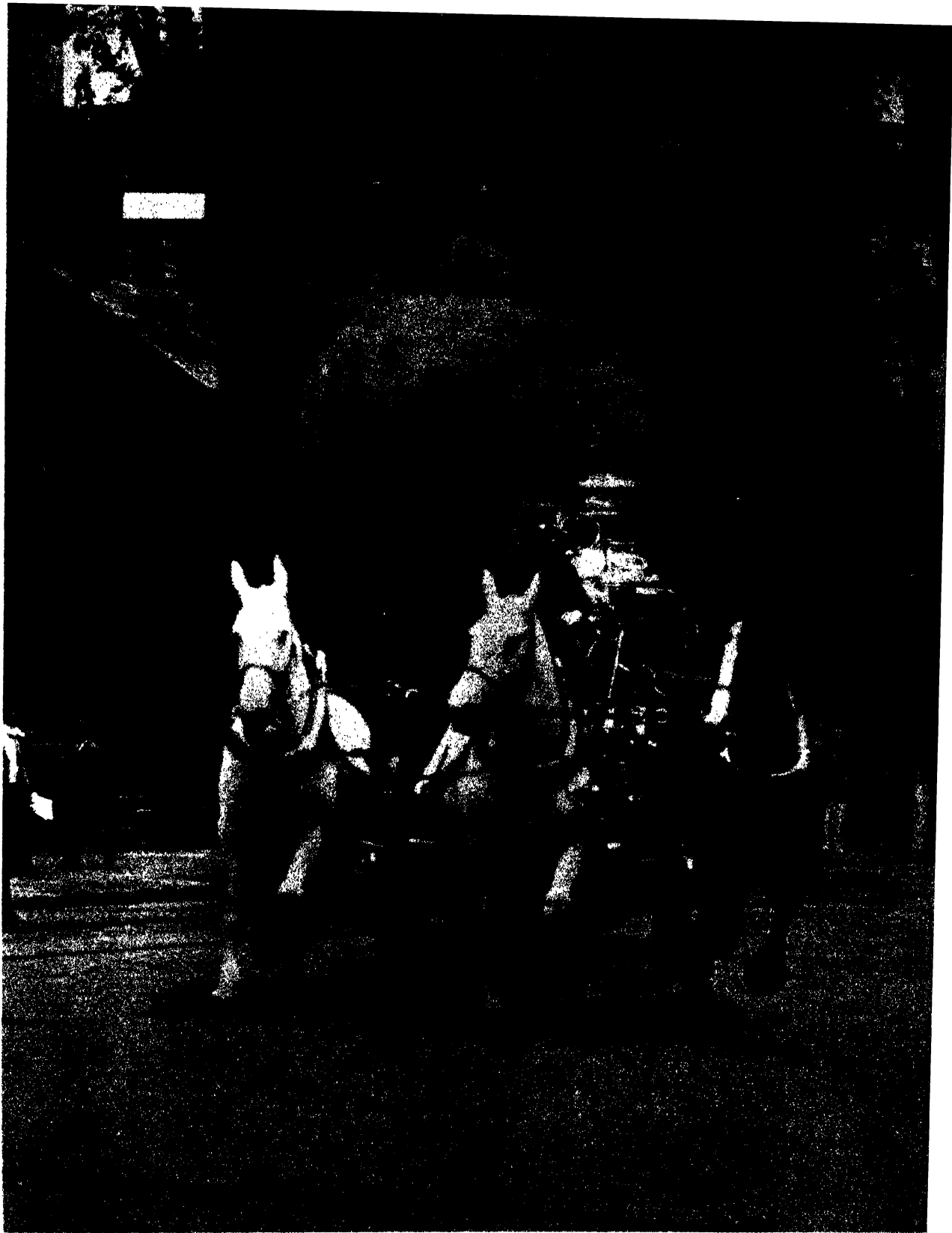
Warner, a two 10-strike, the unprecedented success of filmville." That was *Variety's* verdict.



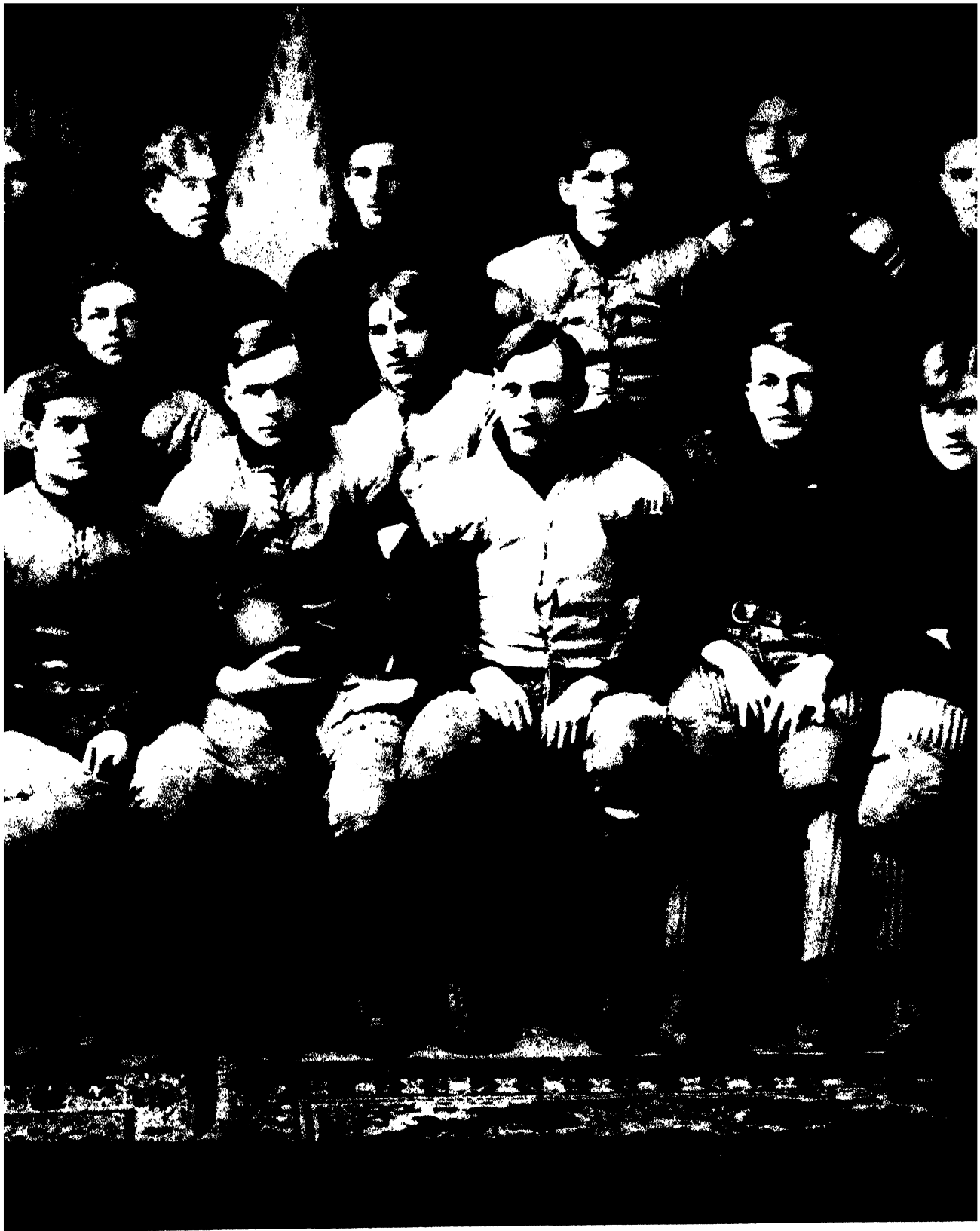
It was a triumph the Warners never dreamed of when they landed in Baltimore years before.



America was a land of opportunity. Some day they, too, would join the "carriage trade."



The boys enjoyed the dash and color of the gay '90's which had just come in with a flourish.



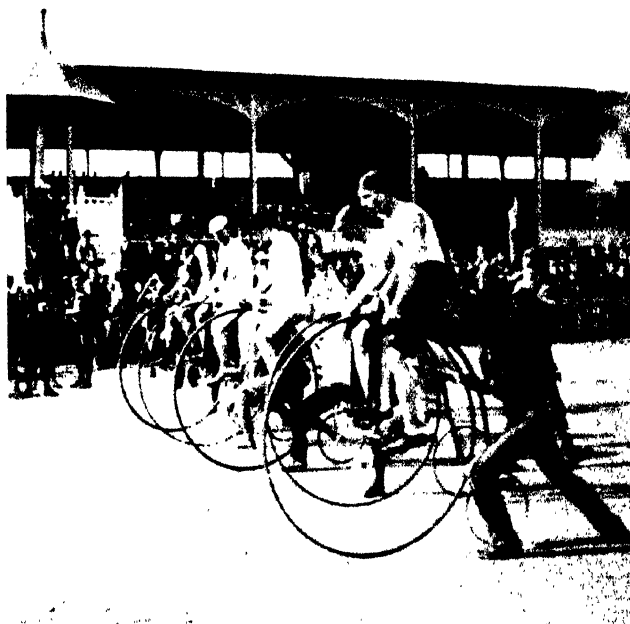
Albert Warner, second from the right (top row), became the town's star halfback when the Warner family moved to Youngstown, Ohio. Later on, he played football for Bucknell College.



Harry went to Canton and set up a shoe shop during McKinley's presidential campaign there.



Sam introduced the first ice cream cone to Youngstown to the delight of its natives.



All three brothers set up a bicycle shop where giant two-wheelers could be fixed.



Just after the turn of the century, the Warner boys left Youngstown to strike out on their own and share in the new enterprises which were prospering over the nation. The railroad and telephone were coming into their own. It was Alexander Graham Bell's invention of the telephone and the Bell System's development of amplifiers, microphones, loudspeakers and other communications circuits which, more than anything else, made possible the talking picture. Without them, Edison's and DeForest's inventions could not have brought sound movies to the world. The telephone opened a new field of employment for women at switchboards all over America.



It was the era of J. Pierpont Morgan, the trusts and unparalleled industrial expansion.



John D. Rockefeller was building an empire with oil instead of planning to give it away.



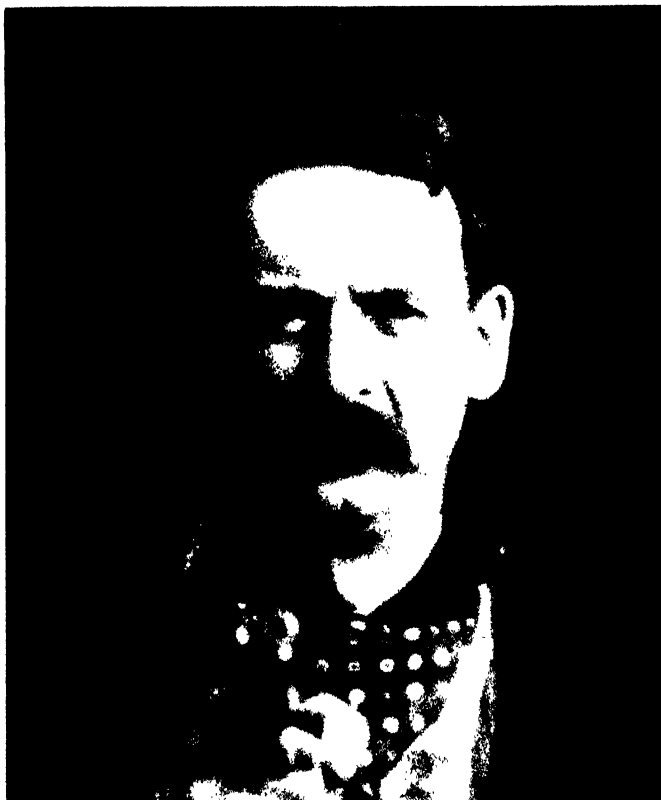
Not so Andrew Carnegie, newly converted from iron-master to generous philanthropist.



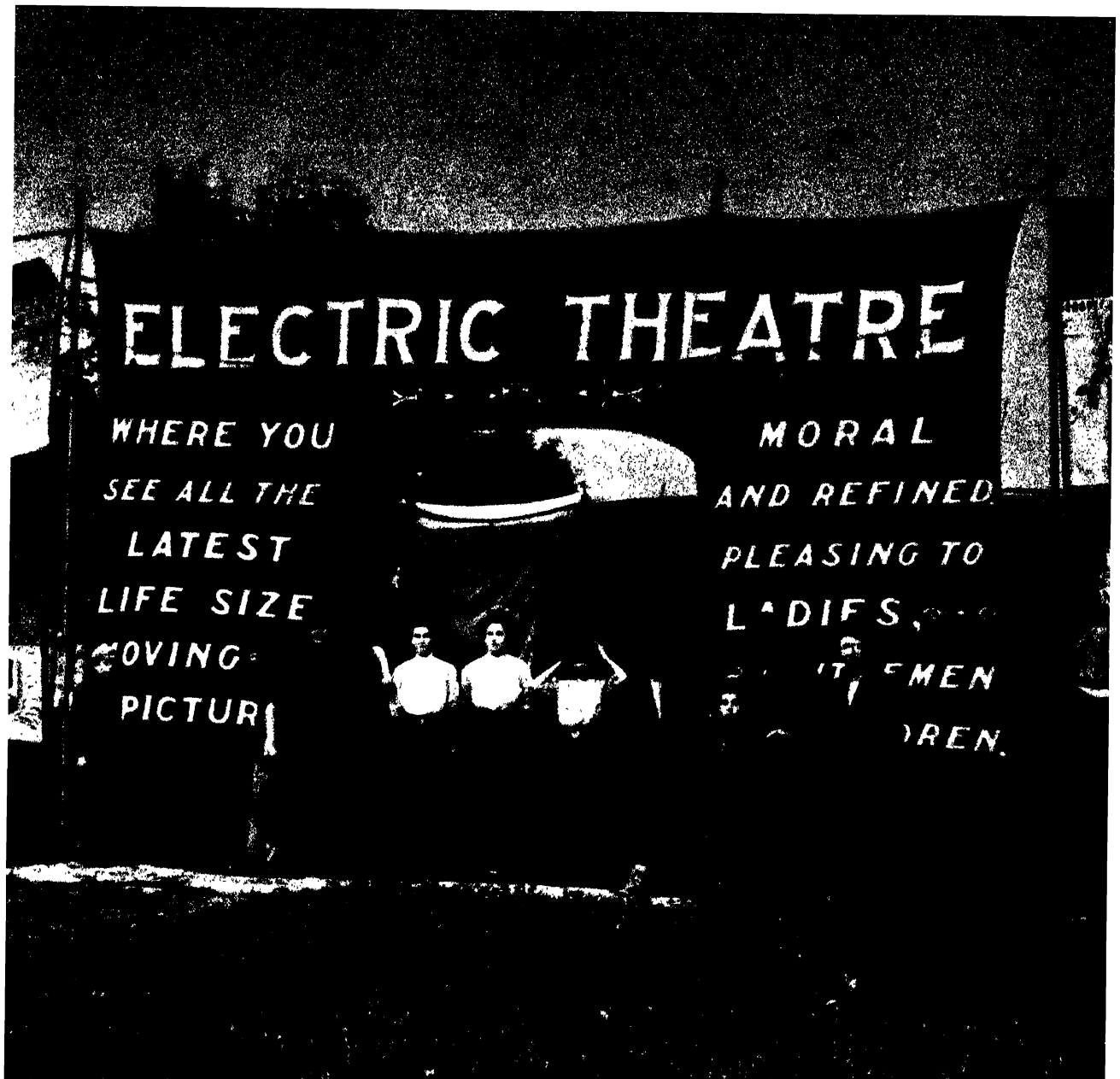
There was a trust-buster in the White House who walked softly and wielded a "big stick."



Jack Warner (left) was kidding the Westerns, called this pose the "Woolly Weary West."



Edwin Porter's *The Great Train Robbery* was the grandfather of American Westerns and outdoor spectacle films. It utilized the close-up for the first time.



Many future film magnates, like the Warner Brothers, got their start showing *The Great Train Robbery* in small towns under carnival banners like this one. Sam Warner barnstormed with it through Ohio. Jack and Albert soon joined him, and their circuit included Niles, Warren, Sharon and New Castle. They would take their projector and can of film, catch a trolley and cut through the Mahoning Valley to the next stop on the line. Mobile film units like this one did a great deal to acquaint rural districts with the magic of moving pictures. For Americans who could not make the journey to city arcades, it was a godsend. As he traveled around the state, Sam watched out for a likely spot to set up a movie theater. He had seen enough of public enthusiasm for the new films to be convinced that there was plenty of money in the business. Harry came home from Pittsburgh, in 1906, on a visit, and his brothers, fired with their new idea, persuaded him to head the business. In New Castle, Pa., there was a vacant store which could be turned into a theater.



This New Castle reconverted store was the first Warner theater. The family ran it with little help from outsiders and made more money in a week than Benjamin Warner earned from his market in a month. New Castle was a gold mine for the enterprising "movie magnates." The only real competitor in the entertainment field was Genkinger's Opera House which billed traveling troupes of varying talents at fancy prices. Aside from picnics in Cascade Park, concerts and local talent, the people of New Castle had little to spend their money on. It was a thriving, prosperous little city thanks to natural resources of the region. Foundries, forges, wire companies, paper, wool and furniture factories were springing up and payrolls were swelling in the process. The new nickelodeon did a roaring business and the Warners learned much about public taste and interests. They were also picking up a few tips on promotion . . .



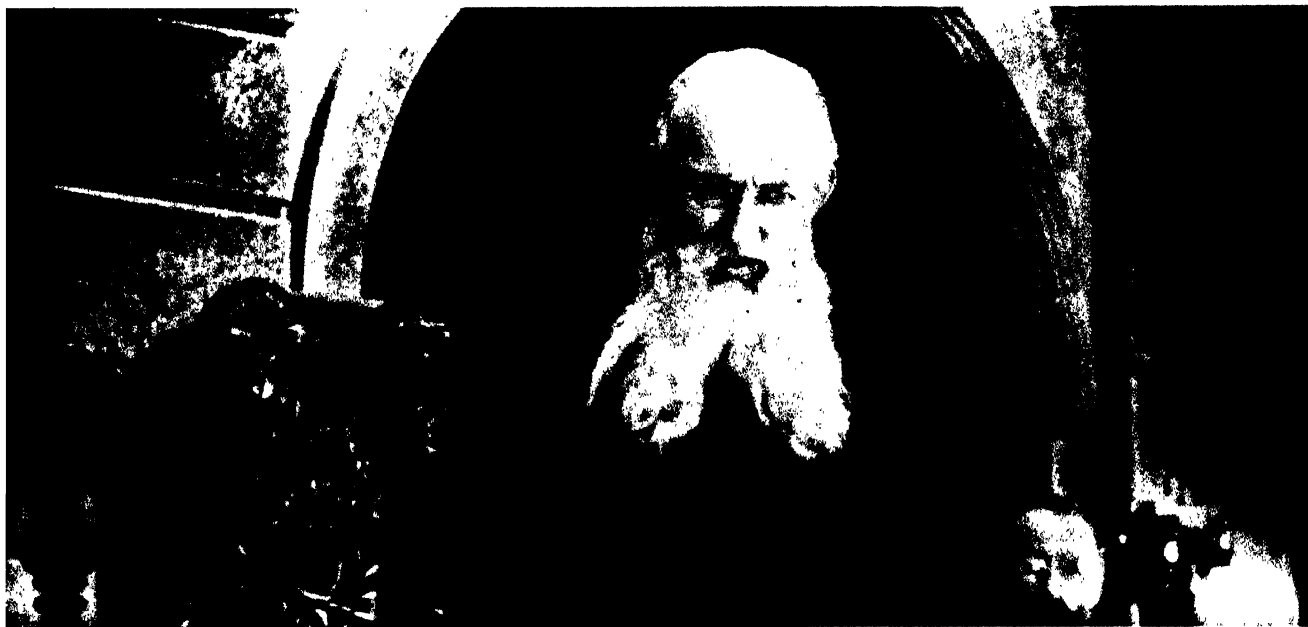
. . . from the phenomenal success of such popular music hall favorites as Eva Tanguay.



After Ambassador Gerard (right) was recalled from Germany, in 1917 . . .



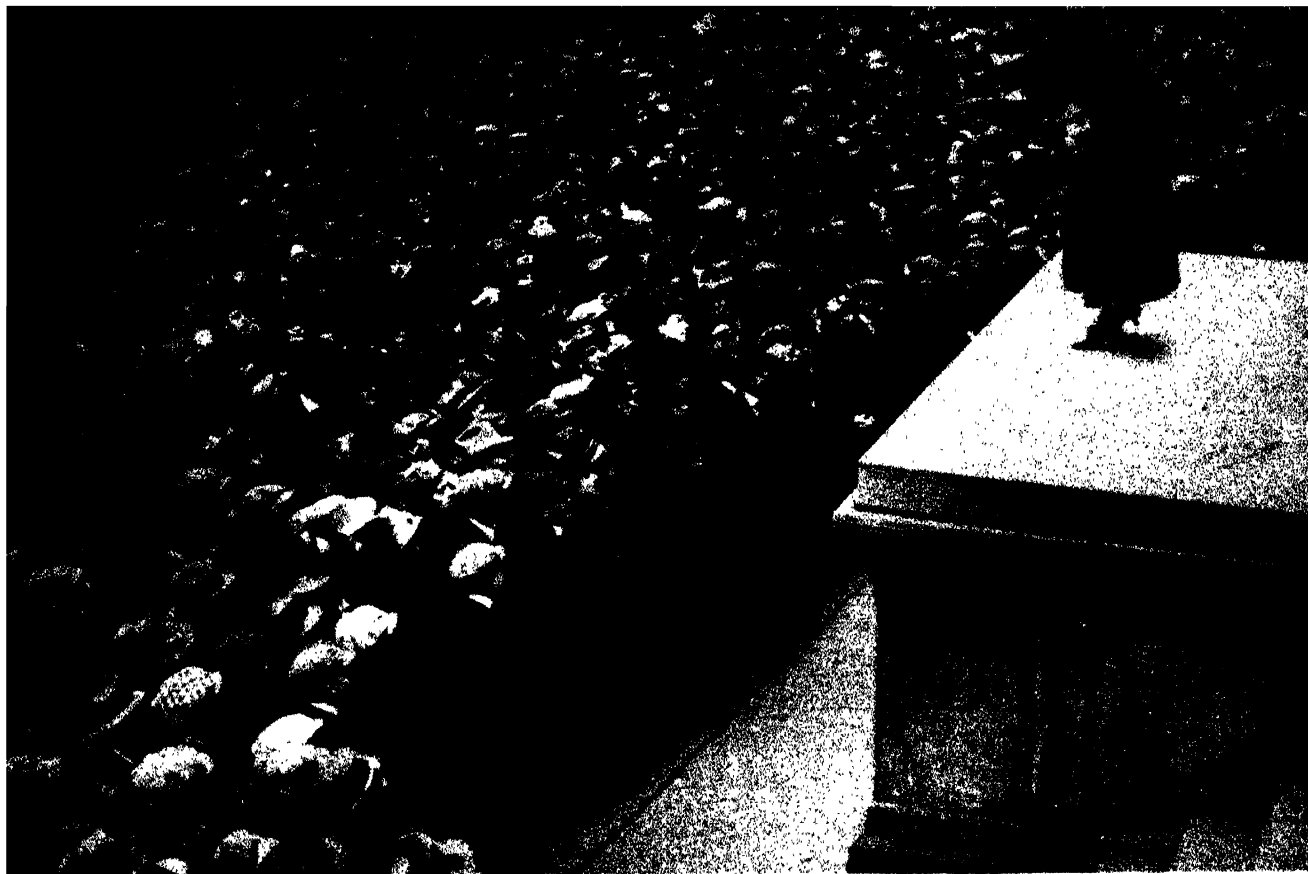
... the Warners picturized his revealing diary, *My Four Years in Germany*.



Germans like Von Tirpitz, advocate of ruthless U-boat warfare, were unforgettably drawn.



German arms and diplomacy were dramatically, factually presented in *My Four Years in Germany*. Ambassador Gerard was played by Halbert Brown (left, below) who looked exactly like him.



This movie did much to build U. S. morale. So did Liberty Loan drives led by Mary Pickford . . .



. . . H. M. Warner and other film celebrities. On screen and off Hollywood worked for victory.



Ernst Lubitsch, right, was an important Warner acquisition during the company's early years.



John Barrymore did not always play the matinee idol, as this scene from *The Sea Beast* proves.



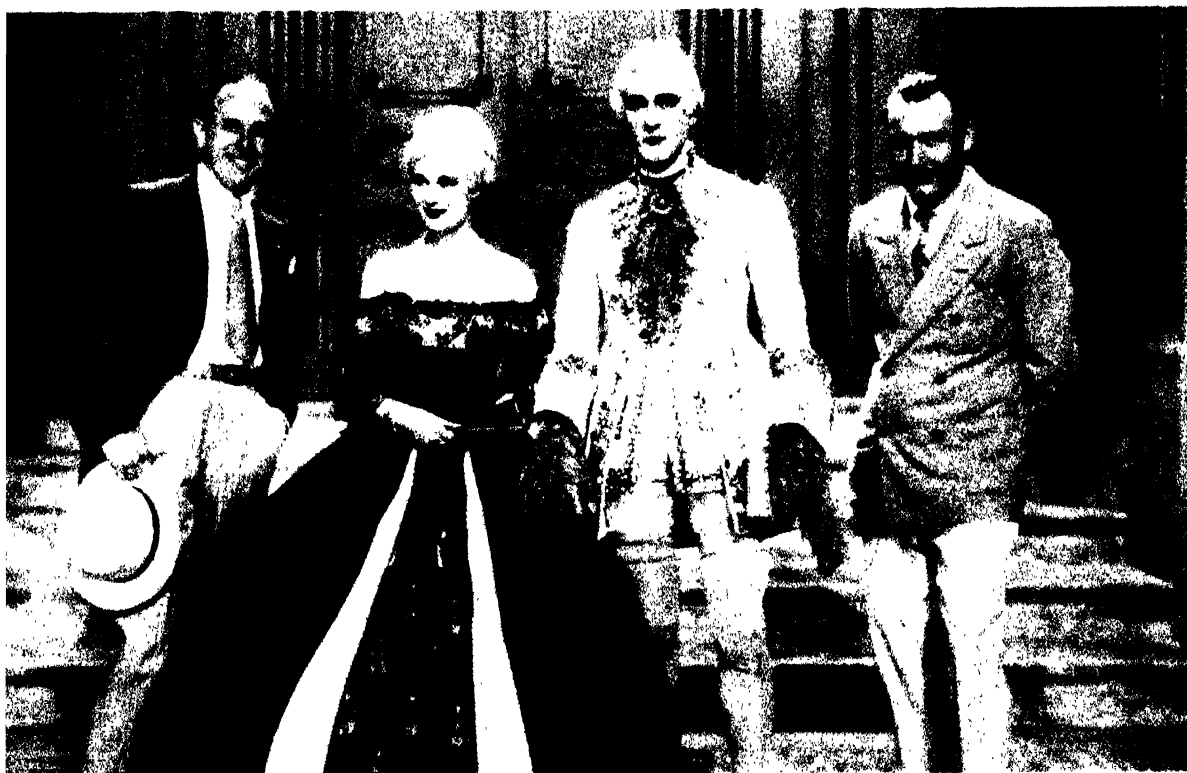
The Warner production of Sinclair Lewis's *Babbitt* captured the flavor of small-town America.



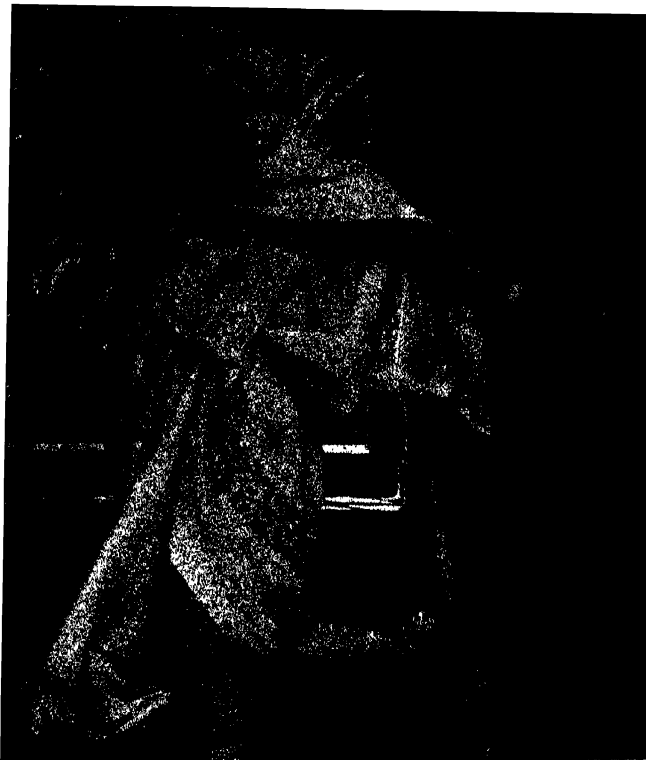
The Warner lot was growing. Here Jack Warner directs planning of the set for *Main Street*.



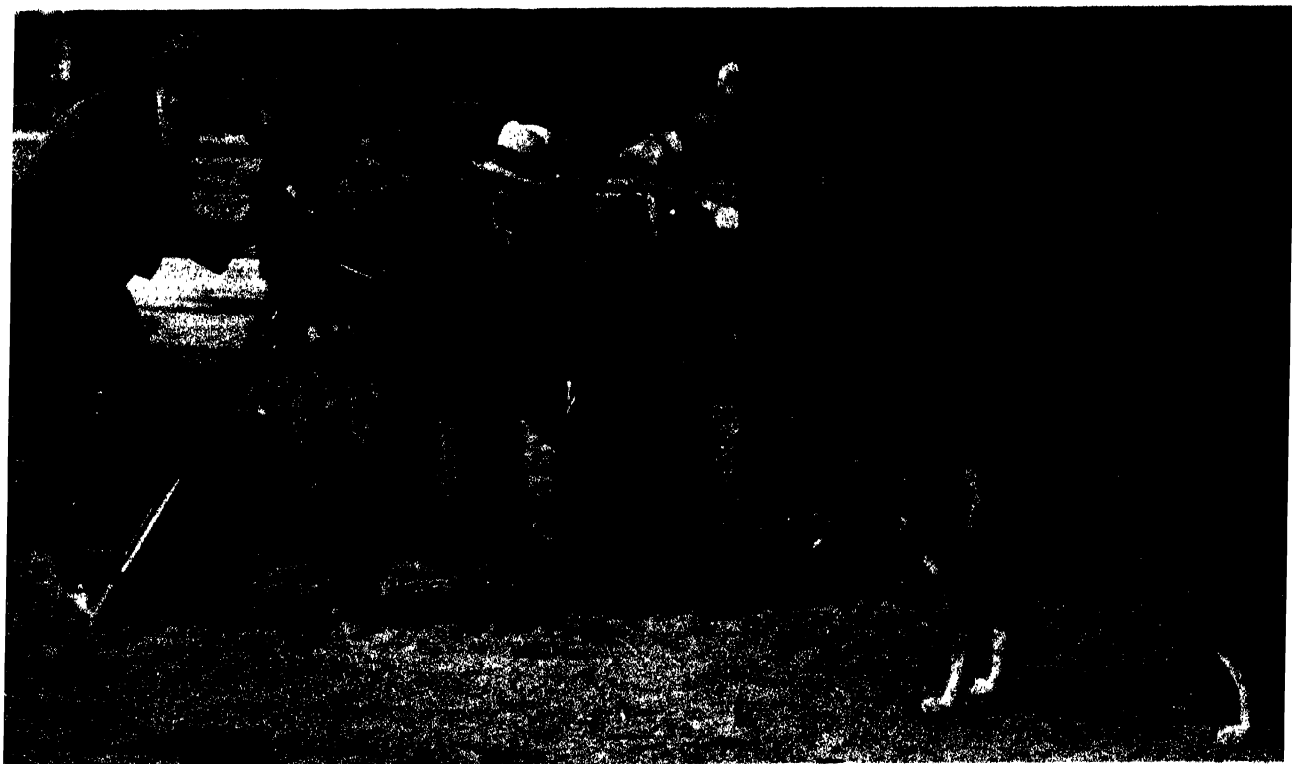
Jack Warner's light trousers look incongruous on a snowy set for *Little Heroes Of The Street*.



Jack Warner, Dolores Costello, John Barrymore and Alan Crosland on the *Beau Brummel* set.



Lenore Ulric (left) and Hope Hampton (left, in *Gold Diggers*) were other Warner stars.



Another star on the Warner lot was Rin-Tin-Tin, the sheep dog idol of millions of small boys.



Here is the old Vitagraph studio, in Brooklyn, before Sam Warner's sound crew moved in. The scene changed completely when insulation arrived and the casual spirit of the old silent production days disappeared. Draperies were hung up in the rafters to muffle sound. Stanley Watkins went about the set clapping his hands, listening for echoes. Occasionally, Sam Warner, who was something of a practical joker, would hide in a corner and clap again with perfect timing. Watkins, who was always the perfectionist, immediately hung up more draperies, convinced that the echoes were getting worse instead of better. Ed DuPar, still with Warners, was the cameraman on this early project. He achieved as much camera mobility as possible by running four cameras on a take. One master camera ran continuously on a long-shot set-up while the others were used to get cut-in shots. Sometimes he would make ten or twelve changes on the close-up camera in the course of one ten-minute recording. The first narrative short made in the



Brooklyn studio was *The Volga Boatmen*. For this opus, they imported loads of salt to simulate snow and braced one hefty member of the crew off stage so the "boatmen" could have something to pull on. The sets for these shorts became more elaborate, and Stanley Watkins, then president of the English Folk Dance Society, borrowed Warners' backdrops for a show he directed in his "spare time." They sent to Germany for pure optical glass to use for the front of the camera booth where Ed DuPar stifled during the takes. They experimented with sound dubbing, and Herman Heller, Warners' musical director, thought up some original uses for it. In one earthquake scene, tons of bricks were rolled down a chute and recorded, then the assembled voices of several extras were dubbed in over the sound. The short-skirted Vitaphone girls who opened every program with a blare of trumpets could thank a group of unphotogenic musicians for the sound.



This picture, made during the filming of the first Vitaphone shorts, shows what an improvement the Manhattan Opera House was over the Brooklyn studio. The boarded-over orchestra pit held a ton of equipment. To the left of the insulated camera box is Sam Warner in a black suit. In front of him is Herman Heller waiting for the signal to start recording. The Warners pioneered with incandescent lights because the microphones picked up the sound of arc lights. They hooked up as many 1000-watt lamps as they could in the old mirror reflectors.



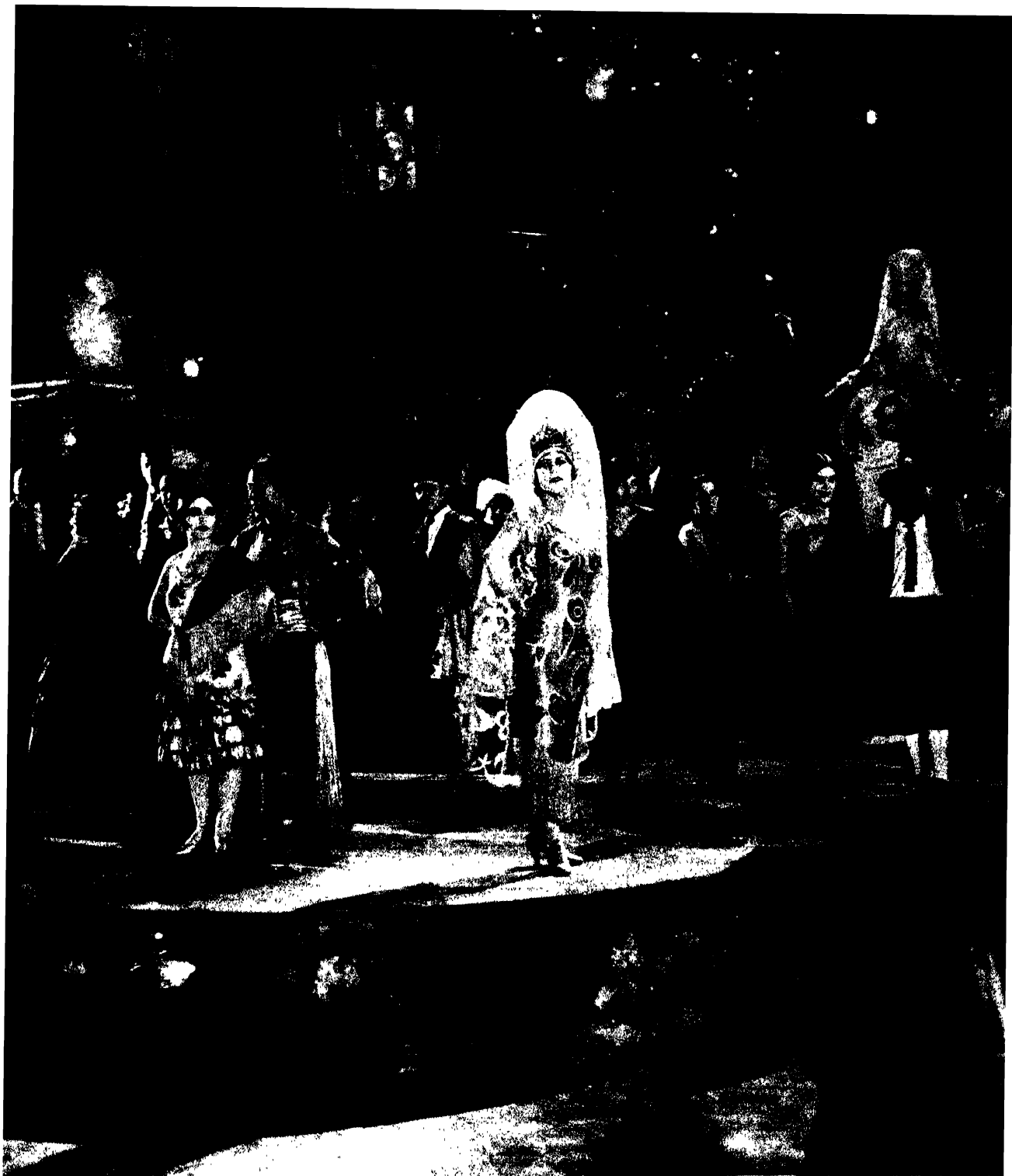
Only rarely, did the crew have time to be photographed. Herman Heller stands at the far left, Marion Talley in the center, Sam Warner in his customary dark suit next to her and Stanley Watkins at the right front. The shorts were in the cans and they could stop worrying about crickets, rumbling subways and camera problems. All they had to do was wait for the public's verdict which was not long in coming. Vitaphone was so convincing that incredulous first-nighters hid in the wings to catch Martinelli coming off stage.



Mischa Elman's violin and Martinelli's tenor caused the audience to break into cheers.



The New York Philharmonic, conducted by Henry Hadley, played the *Don Juan* score. Herman Heller, above, Warner musical director, takes the baton for a moment.



Anna Case sings her solo in the final big production number of the evening called *La Fiesta*. She was supported by the Cansinos, a dance group, the Metropolitan Opera chorus and Herman Heller's orchestra. The audience was completely won over by the lavish set, nearly-perfect synchronization and well-amplified music. They would never be satisfied with less.



Artistic Revolution

YOU AIN'T HEARD nothin' yet folks, listen to this." The voice belonged to Al Jolson. The time was October 6, 1927. The occasion was the premiere of *The Jazz Singer* at the Warner Theater, New York. It was the first time an actor had delivered spoken dialogue from the screen, and the audience was electrified. A year had passed since the revolutionary premiere of *Don Juan* and the Vitaphone shorts, but still, Hollywood was not convinced that sound motion pictures had come to stay. Other producers tried to laugh off the Warner successes which opened soon after *Don Juan*—*The Better 'Ole* and *When a Man Loves*. The fact that these three pictures, complete with synchronized musical scores and Vitaphone shorts, were running simultaneously during the winter of 1926-27 and packing 'em in made little difference to the tycoons of filmdom. They called it a temporary fad, prophesied that the public would soon tire of the novelty, and refused to accept the challenge thrown out by Warner Brothers.

After *The Jazz Singer*, they couldn't keep their heads in the sand any longer. The "Great American Public" demanded sound pictures, and it wanted talkies, not merely films with synchronized scores. Jolson's short speech had been ad libbed between two songs which were being recorded. It had gone into the recording and when Sam Warner heard it on the playback he decided to leave it in. Of all the decisions he had made for his company, this was probably the most far-reaching. It was also his last. Exhausted from overwork, Sam Warner developed pneumonia, and on the day before *The Jazz Singer* opened, his brothers were racing across the country to be at his bedside. Harry and Albert reached him just three hours too late.

Sam died before the full impact of talking pictures was felt in the industry. He had seen only the beginnings of the enthusiastic public response to sound. Not even the optimistic Warners could have predicted that weekly theater attendance would jump from 57,000,000, in 1927, to 95,000,000, in 1929, chiefly because of sound. This was what they had gambled on, and what their ingenuity and showmanship had produced. If sound had been presented half-heartedly, with mediocre talent, the public would undoubtedly have remained apathetic. The product developed by Western Electric was good, but it had to be demonstrated with showmanship and good taste. Its introduction to the public needed—and got—all the show business know-how

that the Warner Brothers' previous 25 years of experience provided. The Warners had proved there was an enthusiastic market for sound films and now, in 1928, the rest of the industry was ready to follow them.

This change of attitude, on the part of the Big Five, was in sharp contrast to their previous "hands off" policy on sound pictures. Until 1928, the Warners had the field to themselves—with one exception.

That exception was Fox, whose first short subjects, comparable to Warner Vitaphone shorts but using sound on film, were shown on January 21, 1927, along with *What Price Glory*, a Fox feature film. On May 25, 1927, Fox presented its first silent picture with a synchronized sound score—*Seventh Heaven*. Movietone shorts which accompanied it included numbers by Gertrude Lawrence, Ben Bernie and Chick Sale. Fox Movietone made its greatest contribution to public entertainment and information through the talking newsreel. The first all-Movietone newsreel was shown October 28, at the Roxy Theater. It met with instant popularity. The colorful and influential personalities of the world flickered and talked across the silver screen—King George V, the Prince of Wales, Marshal Foch, Poincare, the Crown Prince of Sweden, Lloyd George and Ramsay MacDonald. These newsreels brought contemporary history alive and created a taste for vivid journalism.

The success of *Don Juan* and the Vitaphone shorts, followed by Fox Movietone newsreels, foreshadowed the public demand for talking pictures—a demand which rose to a clamor when Jolson spoke his now-historic line in *The Jazz Singer*. Exhibitors, quick to sense the public's interest, began to wire their theaters for sound and the race was on between producers to gain leadership in the field. As soon as the Big Five realized they had to jump on the bandwagon to survive they pressed Western Electric for licenses. By the end of the year, Paramount, Metro-Goldwyn-Mayer, United Artists, First National, Universal, Christie Comedies, Hal Roach, Victor Talking Machine Company and Columbia Pictures had been licensed by Western Electric to produce sound pictures.

To meet this competition Warners had to turn out sound pictures as fast as possible. Their moderate resources were not enough. The profits they had made on *The Jazz Singer* had been ploughed back into the business. In the summer of 1928, they bought the Stanley Company of America, getting as part of the deal 250 theaters and a third of First National Pictures. Then they bought another third of First National and upped their theater chain to 500 theaters. Now, all they had to do was make pictures.

Jack Warner and his studio crews carried on after Sam's untimely passing to satisfy the insatiable demand for sound pictures. In the spring and summer of 1928, they released *Tenderloin*, *Glorious Betsy* and *The Lion and The Mouse*—and many others—all of which contained some talking sequences. These talking inserts were called "goat glands" in the trade. They helped audiences adjust slowly to the all-talking movies which came later.

Along with these feature-length films, Jack kept shooting Vitaphone shorts at the rate of four a week. Sometimes he would finish ahead of schedule and do a little more work on the studio's pet project, *Lights of New York*. This film had started out to be a two-reel short,

but the crew became so intrigued by it that they kept shooting, elaborating on the plot as they went along. Someone finally called a halt at five reels, and the first all-talking feature was born. *Lights of New York* was a hit.

Two months after *Lights of New York* reached the screen, the Warner Brothers presented *The Singing Fool*, starring Al Jolson. While this was not an all-talking picture, it was the greatest success the industry had seen in many a season and it won for Warners an award of the Academy of Motion Picture Arts and Sciences "for making an epoch in motion picture history."

Sound pictures were over the hump now. The public wanted them, the industry was prepared to produce them. All that remained was for the exhibitors to make the changeover from silent to sound projection equipment in their theaters. They were not long in doing it. Without their ready co-operation, sound motion pictures would never have reached the nation and the world as quickly as they did—and a revolution in a major industry, creating an important business enterprise and thousands of jobs, might have been delayed for years.

When *The Jazz Singer* was released, only 100 theaters were wired for sound. Silent Warner features at that time reached some 7,500 theaters. After the New York opening, road show engagements were arranged in key cities across the country, stimulating the demand for installations. Warner Brothers assumed the risk of installing road show equipment, which was later taken over by the theater owners permanently. But most exhibitors, especially the small independents, demonstrating the showman's sense for anticipating public wants, stepped out and risked their capital to equip their theaters for sound. It was by no means a small risk. They had seen—or rather heard—sound tried before. And it had failed. And the cost of installation at that time ran from \$8,500 for a theater of fewer than 1,000 seats to \$20,000 for theaters of more than 2,500 seats. Despite the high costs, however, exhibitors were able to pay for their sound equipment with earnings on *The Jazz Singer* alone.

More than the courage of exhibitors was needed to bring the public sound films. Someone had to make the equipment—and quickly. Less than six months after the premiere of *Don Juan* and the Vitaphone shorts, Western Electric got into larger scale production and, with its parent company, American Telephone and Telegraph, set up ERPI (Electrical Research Products, Inc.) to furnish acoustical engineering assistance to producers and exhibitors and to license the use of sound equipment manufactured by Western Electric.

ERPI started by supplying 14 to 15 installations a month in 1927. By June 18, 1928, 220 theaters were showing sound pictures. Installation schedules doubled and redoubled, and at the close of 1928, more than 1,000 houses were equipped. That year ERPI's business in theater equipment amounted to \$12,000,000.

All major Hollywood producers had decided to convert to sound and ERPI had agreed to furnish recording and reproducing equipment for licensees. To a large extent, it was a custom job for each studio. The problems of design, manufacture, installation of the equipment, and training of the producers' staffs in its operation were truly appalling. To any organization not equipped with manufacturing facilities, technical experience and personnel possessed

by ERPI and its parent company, Western Electric, the difficulty would have been insuperable.

Beginning in 1928, ERPI had only 180 people on its payroll. But at the end of the following year, 2,400 people were earning a living in this one part of the industry alone. Hundreds of others were employed in putting sound equipment in the theaters, since ERPI only supervised and inspected installations, and exhibitors hired local labor to do the job. ERPI surveyed theaters and studios to determine the equipment needed, made acoustical analyses, and furnished reports. They established projectionist schools in 17 cities, trained operating personnel and, as part of a development program since continued by Western Electric, they established a laboratory in Hollywood to solve current problems and carry on field trials of new developments, using the services of Bell Telephone Laboratories.

In 1929, ERPI men were traveling around the world installing sound equipment in every country on the globe.

Thus Sam Warner's dream blossomed into a new industry, making jobs, increasing the dissemination of English speech, American culture and way of life and popularizing American products all over the world.

By the end of 1929, nearly 4,000 theaters had been equipped by ERPI and its revenue from theater equipment in a period of three years totaled \$37,000,000. About this time the price of installation for theater sound reproducing equipment had been reduced so that even the smallest theater operators could afford installations, and the outlet for sound pictures increased commensurately.

The effect on Hollywood was prompt and far-reaching. By April, 1929, more than 40 sound stages were being operated by the studios.

What was probably the quickest industrial and artistic revolution ever staged passed the crisis by 1930. If it wasn't a talkie, it wasn't a movie, and silents had come to be known as "dummies."

Symptomatic of the radical changes which sound had brought about were the new "SILENCE" notices hastily plastered over Hollywood studios. The carnival spirit had died as soon as sound-proof cameras were born. No longer were tourist crowds welcome on the fabulous sets. Shooting became an indoor affair, something from which the rest of Hollywood was barred.

The labor turnover was terrific. Instead of needing "mood music" pianists and violin players who soloed more or less *rubato*, the studios had to call for ensembles and orchestras who would play carefully worked out scores to accompany the talking film. There was also a complete turnabout in producing personnel. Broadway theatrical talent was at a premium and directors, writers and actors invaded Hollywood. Story departments bought up all the plays they could lay their hands on. The lavish outdoor sets were forgotten and experts on *intime* drawing room comedies hired. And, of course, the most dramatic phase of the revolution occurred on star payrolls.

"Could Garbo talk?" was the leading question of the day. Canny producers who were sure of their material capitalized on the suspense. Other less fortunate studios weeded out their non-talking artists. Starlets unable to memorize four or five lines of dialogue, much less retain

them before the cameras, went back to Peoria or Schenectady. They were replaced by equally glamorous, but more serious, dependable hopefuls.

English stars enjoyed a tremendous vogue because of their low-pitched, well-modulated voices. Ronald Colman symbolized the idols of this transition period. Other foreign-born imports suffered under the demands of sound recording and either learned English or sailed for Europe. Rising young stars, whose voices were well adapted to sound, got a boost up the ladder. Janet Gaynor, Joan Crawford, Edmund Lowe, Nancy Carroll, William Powell, Warner Baxter, Norma Shearer, Clive Brooke, Adolphe Menjou stood out. Many of the old favorites were doomed to oblivion when their directors heard the playbacks. One wag ventured the opinion that talkies might succeed in making English the common language of America. Francis X. Bushman, sartorially elegant idol of the silent screen, predicted that talking pictures would mean "The elimination of a lot of screen pets with listless, dreamy voices who have never had any stage training and don't know the first thing about elocution and the worthwhile traditions that have made the stage the great institution it is."

The influx of theatrical talent, sound technicians and soft-spoken actors had a sobering effect on Hollywood. Sound had erected new professional standards.

But repercussions of the artistic revolution still remained to be felt. Sound would change the type of picture being made, erect new acting standards and force a complete wedding of sound and motion. Producers would learn to their sorrow that transplanting theatrical talent and photographing box sets did not guarantee artistically perfect sound films. The new technique had to be mastered as slowly as the technique of the silents had been learned. It amounted to a retrogression in fact, for the camera became paralyzed in the face of a static mike. The advances in camera mobility made during years of experimentation were abruptly dismissed. The emphasis was on sound and cameras were trained relentlessly on faces, mouths and even down the throat.

The only motion allowed was aimless strolling across the stage from one concealed "mike"—in a phone, a chandelier, or wherever it could be placed out of camera sight—to another. The camera focused on action—then on speech; never on the two together. Audiences were satisfied at first because they were so fascinated by the sound actually coming out of an actor's mouth. They were more interested in synchronization than in the quality of sound reproduction and would have felt cheated if the camera had strayed away from the open mouth. As they became more at home with sound production and the novelty wore off they demanded greater artistry and grew critical of the sound movie's static frame. By this time, the industry had gotten its bearings and was ready to experiment on camera-microphone mobility.

Perhaps the most important effect of sound's industrial and artistic revolution was the economic stability it gave Hollywood. The stock market crash of 1929 rocked the nation and the motion picture industry. But the latter was able to ride out the depression on ever-climbing box office receipts because the advent of sound had occurred before the crash. Fortunately, for the industry, the Warners had promoted sound production just in time. Their popularity undoubtedly saved Hollywood's box office and that box office saved the industry.



Sam Warner (right) did not live to see the sound revolution rock Hollywood. His untimely death occurred on the eve of Al Jolson's (left) prophetic triumph as the star of *The Jazz Singer*. No one can claim singlehanded credit for the birth of talking pictures—it was truly a group enterprise from the start. But the man who had the greatest faith in its future, was certainly Sam Warner. He literally worked himself to death bringing sound films to the public. His inspired decisions saved the new art precious months of development. When the irrepressible Jolson ad libbed all through the shooting of *The Jazz Singer*, Sam Warner urged his brothers to leave it in. Jolson's emotional Mammy song at the picture's close would undoubtedly have won the audience over to sound pictures, but the unexpected talking sequences made the talkies a sure thing. The Warners had met the public response to *Don Juan* by releasing a score of Vitaphone shorts and several features with synchronized sound scores. During the winter of 1926-27, there were three Warner "talkies" running in New York.



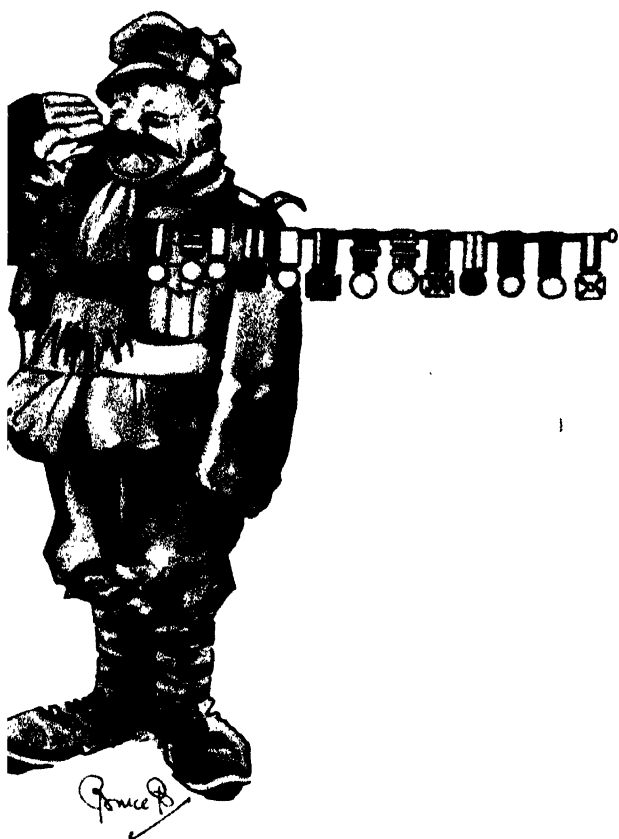
One of them was *When A Man Loves*, starring John Barrymore and Dolores Costello. *The Times* reviewed the sound synchronization as "a triumph for the producers."



Jolson crowned his earlier triumph in *The Jazz Singer* with *The Singing Fool*, released in 1928.



That same year, Warners produced a "goat gland" talkie titled *Tenderloin*.



Warner's second "talkie" was based on Bruce Bairnsfather's cartoon character, *Old Bill*.



Bairnsfather was the Bill Mauldin of World War I, and *Old Bill* was as famous then as Mauldin's "Willie and Joe" have been in the *Up Front* cartoons. Warners cast Syd Chaplin as Old Bill in *The Better 'Ole*, which opened immediately after *Don Juan*. The Vitaphone score was a medley of war songs. This program demonstrated that sound recording could be used for light as well as classical entertainment. Reinald Werrenrath was presented as the "heavy" feature of the program. The rest was in keeping with the picture. Elsie Janis sang the same numbers she used in her war-time tours. She was accompanied by members of the 107th Regiment. Comedy acts Eugene and Willie Howard and George Jessel had the audience rolling in the aisles. Al Jolson's *Mammy* song was only a foreshadowing of things to come. This Vitaphone program confirmed the earlier success of *Don Juan* and set movie magnates to thinking about the commercial possibilities of sound.



This nightclub scene from *Lights of New York*, the first all-talking picture, captures the tinsel gaiety of a New York nightclub during the roaring twenties. The band is a typical jazz outfit—brass, piano, drums and banjo. Their blazers and ice cream pants, the ladies' pointed shoes and their escorts' tux and black ties give you a pretty good idea of what people were wearing around 1928. This simple story of a small town boy and girl, lured by the bright lights to come to New York where they lose their money, and very nearly their virtue, moved audiences to tears. The dialogue was not perfectly reproduced, but it was what the people had been waiting for, so they were uncritical.



The obviously "mike-frozen" villain persuades hero's mother to let her son go to New York.



The big-time gambler gets rubbed out in the end, the "dicks" arrest innocent Eugene Palette, the "moll" confesses, boy and girl are reunited, and everybody goes back to Main Street.



Musicians, hired to put actors in the proper mood, disappeared in the wake of sound-proof stages. Stars were forced to create their own emotional state of mind without mood music.



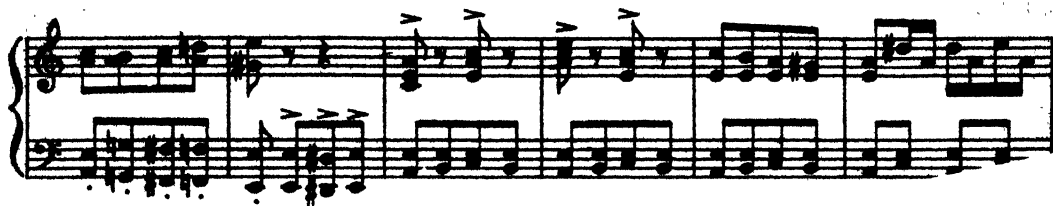
The seldom-photographed but often-cartooned pit pianist disappeared too. This wizard of anticipation had been a fixture in movies during the silent days, building audience moods with

Hurry No. 2

(For scenes of great excitement, duels, fights, etc.)

Allegro vivace

Otto Langey



Good-bye, Sweetheart, Good-bye

HATTON

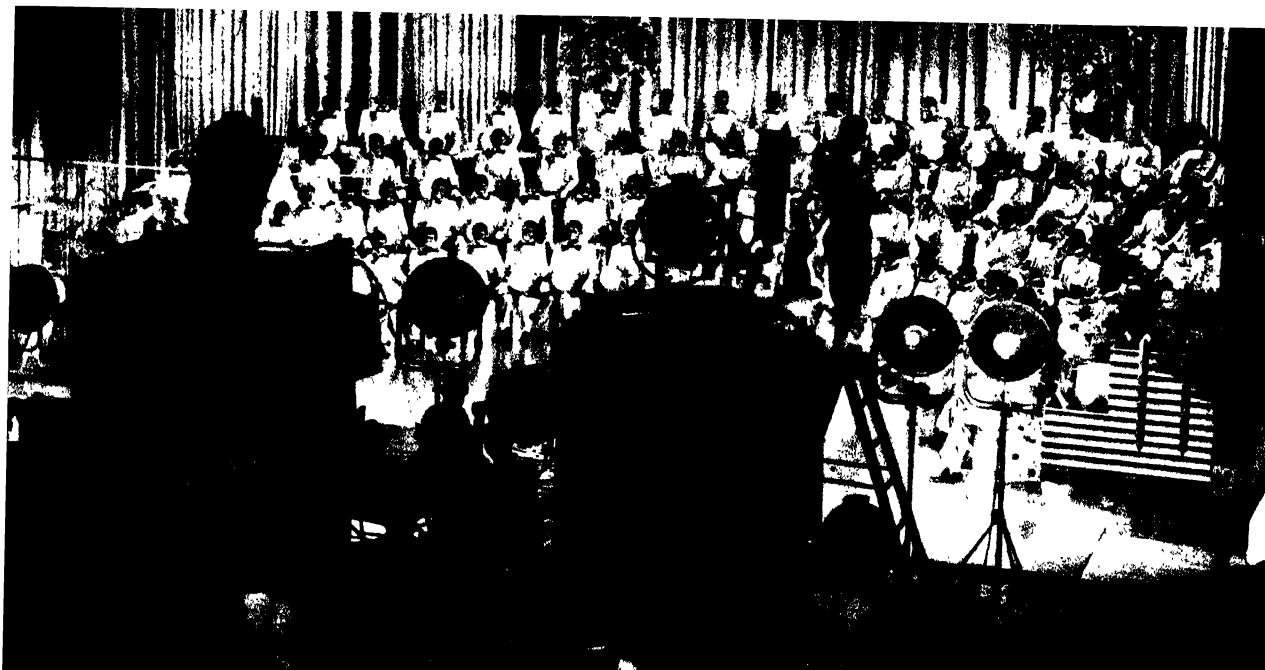
For partings, love scenes, etc.
Andante con moto
legato



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music from books whose selections were numbered, with pages cross-indexed for rapid reference. When the screen turned from love to hate, the pianist raced to catch up, sometimes lost.



Techniques had improved considerably in three years. In the production of *Mammy*, made by Warners in 1930, cameras were still in sound-proof booths but microphone mobility had begun in the form of the man at far left who is swinging a microphone by means of a long pole.



Theater installations had increased in complexity also—from a simple projection booth to an elaborate room full of equipment. The sound control board is on the right, the film projector on the left. Note the record on its turn-table (below, left).



And in Hollywood studios, sound technicians were busy turning out those wax records for distribution to theaters all over the country. Transformed into electrical impulses, the sound waves cut a master record from which hundreds more were stamped. Specialists, like this recording expert who is watching the cutting of a sound track under a microscope, arrived in increasing numbers, and sound laboratories were installed under studio roofs. Edison's dream of a talking picture had ramifications he never thought of. It was the scientist's field day in Hollywood. No one was more astounded than he.



When they shot silents in the old days everybody turned out for the fun. Extras picked off the streets of Hollywood slipped into cowboy clothes or Indian feathers and got ready for the day's chase. Here is a final briefing for the heroine who will pound past the cameras with a mob in hot pursuit. It was simple to load a gang into trucks, carry them off to the hills of Hollywood and shoot reels of "chase" scenes which could be cut into a story later.



The sound film changed all that. Cameramen did their work inside soundproof studios with noiseless cameras. The fewer actors there were the less chance of a slip-up in sound recording. The "mike" hanging close to Spencer Tracy and Bette Davis (above) was similar to those used in radio stations around 1930. It would eventually be reduced in size and made more mobile. Even for this scene from *20,000 Years in Sing Sing*, made by Warners in 1932 after the revolution had passed the crisis, countless rehearsals were necessary to insure perfect sound registration. Director Michael Curtiz had to caution his stars to whisper into the "mike."



Instead of beauty contests and nightclub auditions, producers used the microphone to weed out star material—and make publicity pictures in the process. Young hopefuls walked up to a terrifying “mike,” hoping they could read the lines, let alone register a good voice. Even some stars, struck with “mike-fright,” could not make the transition to sound pictures.



The role of director became even more complex when sound moved in to stay. Michael Curtiz works over some lines with Dolores Costello before shooting a scene from *Madonna of Avenue A*. This half talkie was made by Warners in 1929. Note the inevitable camera box behind Curtiz and the mixer at his panel on the right.



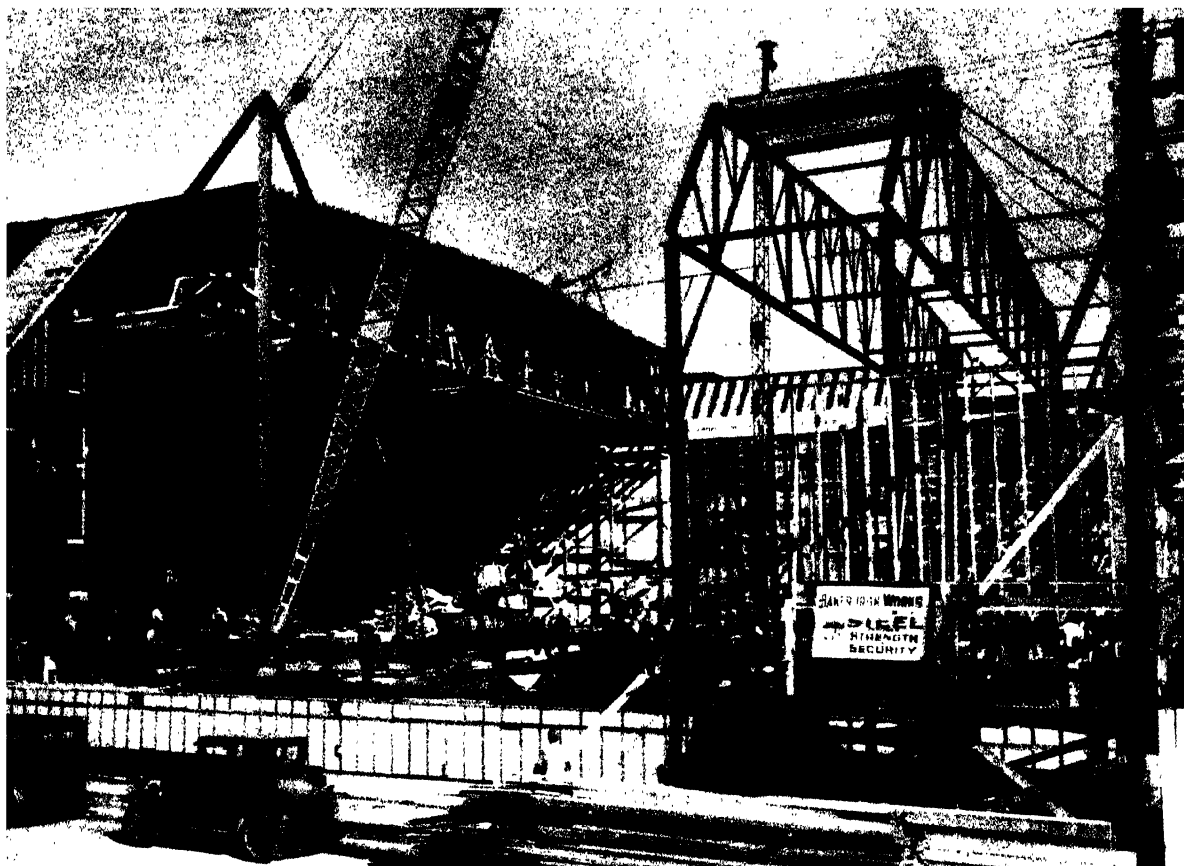
Warner Baxter and Lois Wilson—for him sound was a bonanza.



Colleen Moore and Edmund Lowe—because his voice recorded well he shot ahead.



Even John Gilbert and Greta Garbo were separated. She went on to greater acting triumphs, and he gradually faded out of the public memory. But for a decade they were the screen's greatest lovers. In a moment of nostalgia and shrewd box office intuition, MGM cast them together again in *Queen Christina*, directed by Rouben Mamoulian in 1933. *Love* (above) was one of their most memorable films. Made in 1926, it was the screen adaptation of *Anna Karenina*. Garbo sensibly stuck to silents as long as she could do so without injuring her box office and reputation. Language and diction lessons went on while she was increasing her popularity in these romantic silents. Other less far-sighted stars counted exclusively on their old successes to carry them smoothly into the new talking era. Garbo's intelligent mastery of the new talking techniques paid off when her speaking films were released. Her last silent was *A Woman of Affairs*, adapted from Michael Arlen's sophisticated novel, *The Green Hat*. Her leading man was John Gilbert, as usual. With *Anna Christie*, Garbo proved she could handle talkies.



Sound stages were constructed at record-breaking speed all over Hollywood.



Radio was expanding its nation-wide audience with programs featuring stars like Jack Benny, shown above with Jimmy Grier, Mary Livingston, Don Wilson, and Frank Parker. Movie studios, then, as now, drew heavily from the ranks of radio for talent. And moviegoers, conditioned by voices over the air, were more than eager to hear them from the screen.



Cameramen moved noiselessly about the set on machines insulated with "blimps." This static drawing room scene was characteristic of films made during the talkies' adolescence. Left to right are Corinne Griffith, Ralph Forbes, "Bus" Berkeley and William Goetz. This was before the days when microphones moved on booms. The "mike" does not show in this picture.



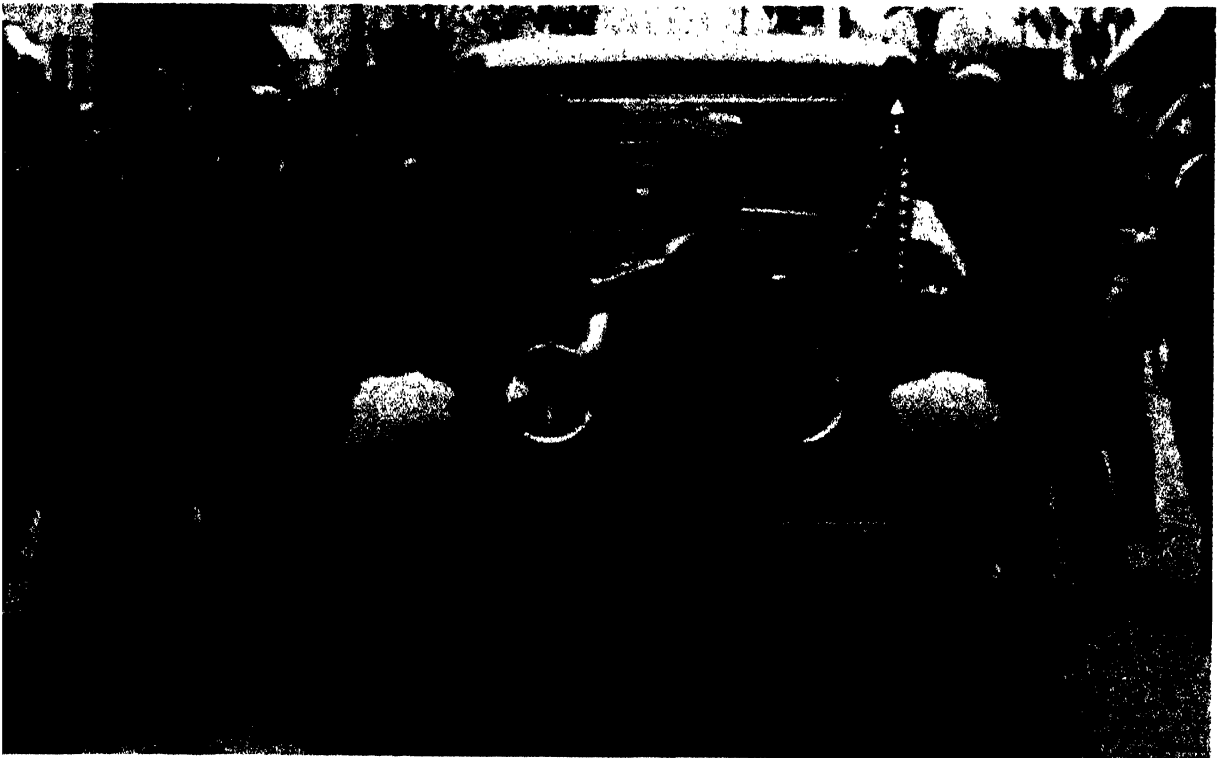
Norma Shearer, who was destined to shoot ahead after the advent of sound films, got her first break in a Warner film called *Broadway After Dark*. This silent film, made in 1924, demonstrated her acting ability even though the spotlight was on Adolphe Menjou, shown above with her. In 1929, she picked *The Last of Mrs. Cheyney* for her talking debut. The adaptation of his successful stage production, which starred Ina Claire, was a box office success.



Most actresses waited even more breathlessly than this starlet for their director's verdict on the play-back. Her director is listening to a dialogue test through the earphones and watching a scene about to be shot through the camera's eye. Note the heavy wrappings which covered the camera in those days before plastic insulation. At that, it was a major improvement over the hot-boxes of early photographers which kept the camera rooted to one spot.



On October 9, 1931, Movietone covered the assassination of King Alexander, of Yugoslavia.



This first spot reporting of an international tragedy foreshadowed the amazing work of news reel cameramen in war years to come. Sound pictures, both news and features, had arrived.



The newsreels contributed measurably to popularizing sound pictures, thanks to newsreel cameramen who established a reputation for being on the spot when history was made. In later years, with portable cameras and sound equipment, roving newsreel men would record the first signs of international aggression, would photograph Hitler, Mussolini and Tojo preparing for global war, would go with our troops, recording action on land, sea and in the air. But before that, sound techniques would undergo years of improvement in Hollywood.

Part II - LEARNING TO TALK



CHAPTER FOUR

The New Screen Drama

GEORGE ARLISS' enthusiastic English fans, who welcomed him home after a series of screen triumphs, did not realize what an indelible impression he had made on the American mind. "My, what a lovely statue of George Arliss," observed one young lady when she crossed the Atlantic and saw Disraeli's monument in Westminster Abbey. It was a fine tribute to Arliss's acting and to the power of sound which had given his characterization another dimension. With their customary showmanship, the Warner Brothers persuaded George Arliss to take the lead in *Disraeli* in 1929. Just as they had insisted upon only the finest music for the *Don Juan* premier, so they wanted to present the best stage talent in their first ambitious screen drama. Arliss had just finished a triumphant American season in *The Merchant of Venice*, and was one of the best-known English actors of the day. He had played *Disraeli* on the stage for five years, and audiences already identified him with the English statesman. But there were thousands of drama-conscious men and women to whom the legitimate theater was inaccessible. For them, a people's theater was born when sound created a full-blown drama of the screen.

The first talking pictures had been disappointing dramatically, largely because of mechanical limitations. Action was confined. But it could not be otherwise when "mikes" were glued to the floor and actors frozen under them. Little wonder then that audiences began to squirm once the novelty of sound had worn off. It was not long before sound technicians had worked out new microphones which could be moved about the set and concealed. Then Director Mike Curtiz, while directing a scene for the screen play of Charles Klein's stage hit, "The Gamblers," conceived the idea of putting the "ice box" on wheels and using it as a roving camera. Thus the now-standard "dolly" shot was innovated, leading later to the boom and crane shots which have given the motion picture camera the flexibility it now enjoys. Later the "ice boxes" which had once held cameramen gave way to "blimps" which merely muffled the roving camera. As soon as progress had been made along mechanical lines, directors and producers laid ambitious plans for sound pictures—with the emphasis on dramatic impact.

The early talkies such as *Lights of New York* were exclusively "talkies." Actors did nothing more than explain what they had done or were about to do. Plays adapted for the

screen lost even that small amount of mobility which the stage permits. No one realized that a film's pace had to be changed with sound plus movement.

Subtitle writers were gradually eliminated from story departments and after the wave of imported playwrights subsided, film writers began to emerge. These scenarists understood the flexibility of the camera and wrote with that in mind. Skill at creating pictorial drama on the screen was halted only momentarily while Hollywood made the transition to sound. Reinforced by a new tool, the American film went on to greater dramatic achievement in the thirties.

One of the first pictures to demonstrate successful integration of sound and motion was *All Quiet On The Western Front*. The producers wisely refrained from using sound relentlessly; instead they introduced talking sequences only in scenes where speech was necessary for the dramatic action. Other sounds—particularly battle noises—intensified the mood of the film. Made in 1930, *All Quiet On The Western Front* did not suffer from camera limitations introduced by sound. The cutting suggested subtleties found in the silent film at its height and the camera moved freely over the scene. Natural sound for dramatic effect was used elsewhere in that year. *Hallelujah*, produced by MGM, capitalized on the suspense created by bird and insect noises, running feet, wind playing through the trees, and rippling water. Some directors were even daring enough to use silence, in contrast to sound, for dramatic effect.

Eugene O'Neill's *Anna Christie* was the turning point of Garbo's career. Film fans had waited breathlessly for her first appearance in a talkie. Now, in *Anna Christie*, they were to hear her. The film ran one reel without Garbo and the suspense mounted. Finally, she entered the waterfront saloon, "Gif me a visky," rolled out over the heads of a taut audience and Garbo talked. She had accepted a challenge refused by many "great name" European stars who abruptly left Hollywood as soon as microphones and amplifiers were installed. Garbo's real warmth and magnetism were brought out by sound. For her this artistic revolution of the films was a bonanza. Promoted as a "siren," she had made her silent picture reputation on the strength of a heavy glamour. This phony character soon disappeared when she began playing intelligent, slightly neurotic, "modern woman" parts. The screen writers no longer depended upon black and white characters or heavy handed story material. Love and hate could be handled with subtlety now that dialogue was possible. While Garbo's shimmering beauty certainly came through on the silent screen, her acting ability might never have been realized without sound.

Also released in 1930, *Applause* utilized sound in conjunction with expert camera work, proving that a synthesis of the two was possible. *Applause* succeeded in shaking off the influence of the stage, which was apparent in most early talking pictures regardless of their dramatic impact. Here was a mature recognition of the film's responsibility to create a dual language of sound *and* motion. Sound was used as a thematic link between actions, conversation played against music and movement remained fluid throughout. Some of the touches may have been a bit flamboyant but they served to point up dramatic effects only partially realized by the talking screen. Directed by Rouben Mamoulian, this film was a fresh and forceful statement of the power of the camera as well as the effectiveness of sound.

The Front Page introduced radical departures in film dialogue. This newspaper man's story called for the terse, staccato speech of the city desk. It did future sound movies a service by setting new standards for dramatic dialogue. Long, verbose speeches had been a millstone around the neck of early talkies and this fast-paced film demonstrated that ruthless editing of screen dialogue was not only possible but desirable. Gangster films, which were to come, would do much of the same thing for screen dialogue. Gilbert Seldes commented: "I think it is correct to say that in the gangster picture the talkies found themselves, and that all pictures made after the gangster cycle was finished are more terse in speech and vigorous in action because of the invigoration which this type of picture brought to the screen." The American idiom caught by new screen writers, many of whom were trained on city desks across the country, found its way into screen dialogue. "Take him for a ride," "bump 'em off," "rub him out," "pack a rod" took the place of wordy, theatrical speeches. Despite this drive to create a true language of the screen, stage importations continued.

Norma Shearer, who shot into prominence with the advent of sound, made many drawing room comedies adapted for the screen from stage hits. She and Robert Montgomery did Noel Coward's *Private Lives* for MGM, in 1931. What the picture lacked in action, it more than made up in witty dialogue.

Actors as well as plays were imported from the theater. Alfred Lunt and Lynn Fontann were drafted by MGM to make *The Guardsman*, one of the better screen adaptations.

Warner Brothers brought another famed actor to the screen when they persuaded Otis Skinner to do *Kismet*. Another star of the legitimate theater who joined the trek to Hollywood was Helen Hayes. In 1931, she won the Academy Award with MGM's *The Sin of Madelon Claudet*.

Screen adaptations grew more ambitious as the difficulties of producing sound pictures disappeared. Directors, actors and writers felt more at home in the new medium and were ready to try anything. Eugene O'Neill's five-hour play, *Strange Interlude*, was translated into a two-hour movie, the thoughts of the actors became articulate through sound, and Norma Shearer and Clark Gable gained new stature. Philip Barry's *The Animal Kingdom* reached the screen in 1932, as did Noel Coward's *Design for Living*.

Sound had created a living stage for a mass audience. The stilted subtitle had been exchanged for the rhetoric of the theater. The camera was making up for time lost during the transition period and had regained its own compelling dramatic quality.

One wit has said that a generation of children grew up thinking every man of history looked like George Arliss. It is little wonder, for the great actor followed his triumph in *Disraeli* with other screen biographies. In 1931, he played *Alexander Hamilton*, in 1933, *Voltaire*, both Warner productions. He also appeared in *The House of Rothschild* in 1934, and played *Cardinal Richelieu* in 1935, two United Artists successes. *The Iron Duke* was presented by Gaumont-British in 1935, with Arliss playing Wellington.

Arliss was more daring than most of his actor friends who doubted if the screen would offer them the same opportunity as the stage. Reminiscing about his decision to abandon the

stage, he said: "It was not entirely due to my native weakness of mind that I decided at last to consider a contract. I had sense enough to know that I was in most things too Victorian in my outlook. I remembered that I continued to take hansom cabs and even 'growlers' in London long after my more sporting friends were dashing about in taxis. I realized that no invention as remarkable as talking pictures could possibly stand still; that by its introduction the gulf between the silent pictures and the stage had undoubtedly become narrower, and that this was probably the moment for me to take the plunge." He was not disappointed in his decision. Instead of regarding motion pictures as an avenue to easy money and mass popularity, he worked tirelessly to master the new technique. Arliss was fascinated by the complex workings of the sound studios. He appreciated the changes necessary to tailor stage plays for the screen. Whenever the choice lay between dialogue and action, he willingly "sacrificed the dialogue and kept in the thrills." The scope of the camera never ceased to amaze him.

Before the advent of sound, character delineation on the screen was little more than type casting. When a personality could speak as well as act, his character became fully rounded, capable of being projected from the screen. These screen biographies, played by Arliss, placed the major emphasis on character portrayal, rather than on action. Every production detail was appropriate to the time and place, thus giving the actor an opportunity to take on the characteristics of the individual he was creating for the screen audience. Arliss paid tribute to one set created for *Voltaire* by remarking that when he actually visited the *Petit Trianon* he felt as though he were on the Warner lot and almost spoke his lines. For these dramatic character studies of great historical figures, the screen could thank new sound techniques which had made them possible. These new techniques proved that screen acting could measure up to the best legitimate theater performances. Their influence was felt in other films where the emphasis on character was not so pronounced. A new emotional depth began to appear, and film content became more subtle as writers dealt in character motivation as well as bright dialogue or narrative speech. Action again was recorded by the camera instead of being told by word of mouth, thus revealing character instead of obscuring it. If Hollywood grew to be more than a little "great man" conscious, it was because of the convincing performances of George Arliss. One lady was so impressed that she submitted a play which cast him as Henry VIII in Act I, Duke of Norfolk in Act II and Queen Elizabeth in Act III.

The influence of this dramatic power, created through sound, began to come through in films whose chief characters were hardly historic personages. *It Happened One Night*, produced by Columbia in 1934, took a simple everyday story and created two lovable, universal characters. The dialogue was natural and spontaneous. The characters were real people who spoke in the American idiom. Film audiences took Claudette Colbert and Clark Gable to their hearts. Without sound, it would have been impossible to provide the casual, intimate dialogue that gave *It Happened One Night* such particular charm.

In the same year, MGM's *The Thin Man* also delighted audiences with its fresh, amusing talk. Adult comedy had reached the screen as the direct result of sound. There would always be a place for pantomime, but actors no longer depended on the custard pie when they

had a bright line to deliver. From early sound adaptations of drawing room comedies, the screen had progressed to an original conception of how film comedy should be written.

Out of the synthesis of sound and motion came one of the film's best-loved figures, Mickey Mouse. Walt Disney had made two pictures starring Mortimer Mouse, but these were ignored by the film-going public. As soon as his third, *Steamboat Willie* was released, audiences acclaimed the animated cartoon. What was the reason for Disney's overnight success? In the third cartoon he had used sound. The moment was psychologically right, for in September, 1928, the country went wild over the talkies. One of the most imaginative masters of sound techniques, Disney got a laugh every time Mickey's squeak or Donald's outraged squawk filled the theater. He integrated motion and sound so completely that the responsive audience was only conscious of what seemed like magical entertainment.

The flexibility of sound film had demonstrated its scope and intensity. The groundwork had been laid with biographical films like *Disraeli*, *Voltaire* and *Alexander Hamilton*. The charm of the medium was amply illustrated in bright screen comedies such as *It Happened One Night* and *The Thin Man*. Its virtuosity was demonstrated by the Disney cartoons. And sound had revolutionized the ordinary screen drama which depended on a combination of elements—character development, humor, and suspense.

In 1935, one of the great screen classics of all time was produced—*The Informer*. This film, adapted by Dudley Nichols from Liam O'Flaherty's novel, proved that within 10 years Hollywood had not only assimilated the new technique of sound but was using it effectively. John Ford took advantage of both dialogue and natural sounds to build his suspense and sustain the tragic mood of the film. He used monologue to convey the thoughts and inner motivations of characters. Symbolic use of sound was handled with restraint and power. A ticking clock repeats its message of doom in scene after scene. The tap, tap, tap of a blind man's cane provokes associations which intensify the film's dramatic form.

The Informer illustrates the drastic change in dramatic form and content which had been wrought by sound. The film gained a new spontaneity, immediacy, suggestiveness, emotional depth and rhythm as a result. This dramatic strength and vigor would sustain the film through years of changing public taste and interests. It would also have a telling sociological effect, as we shall later see.

George Arliss, in his engaging report *My Ten Years in the Studios* tells a story which shows how the talking screen brought new realism to motion picture drama.

The story was told to Arliss by a nurse. One of her patients was a young waitress who noticed a book under the nurse's arm one day as she approached her patient's bed.

"What are you reading?" the girl asked.

"Oh, it's a historical book," said the nurse, "I don't think it would interest you."

"Who's it about?" queried the patient.

"It's about Disraeli," said the nurse, "I don't suppose you've ever heard of him."

"Oh yes I have," answered the girl. "Wasn't he a great British statesman who afterwards went into the movies?"



1. "Now that the honorable gentleman—with his customary eloquence and tact—has expressed his customary disapproval. . . ." Benjamin Disraeli, played by George Arliss (left), the newly elected Premier, calmly explains to the House of Commons his farsighted reasons for wanting to buy controlling shares in the Suez Canal. Gladstone, liberal opponent of Disraeli, the con-



servative Prime Minister, succeeds in adjourning Parliament, leaving Disraeli without the finances or authority to carry out his plans for Britain. Both England and Russia have their eyes on the Suez Canal, and Disraeli knows that there are spies around him to inform Russia of any move on England's part to purchase the gateway to the Far East.



2. Public agitation runs high against Disraeli. The people are reluctant to stand behind the imperialistic policies of their new leader.



3. Disraeli cultivates the friendship of mysterious "Mrs. Travers" (Doris Lloyd). He discovers that his secretary, Foljambe, is married to her and that both are spying for Russia.



4. Lady Clarissa (Joan Bennett), Disraeli's staunchest admirer, loves Viscount Charles Deeford, but will not accept him because he is against Disraeli and is not a "man of action."



5. Disraeli believes that Deeford (Anthony Bushell) has possibilities. He decides to make him one of his secretaries. Mrs. Travers tries to overhear Disraeli's plans for Deeford.



6. Disraeli, having won Charles over, decides to help him win back Lady Clarissa. Under Disraeli's tutorship, Charles carries out his first lesson, talks romance, avoids politics.



7. Disraeli, unable to secure funds from the Bank of England for purchase of Suez Canal stock from the Egyptian government, calls for help from Hugh Meyers (Ivan Simpson), Jewish banker, who agrees to get gold from the Argentine.



8. Meanwhile, the spies, Mrs. Travers and her husband, Foljambe (Disraeli's secretary), have been reporting to the Russian ambassador, Count Bosrinov (Michael Visaroff). Disraeli, knowing of the entire spy set-up, has been planting false leads for them to discover. Disraeli tells his wife, Lady Beaconsfield (Florence Arliss), that he is going to send Charles to Cairo to buy the canal before the spies learn of his actions and report the news to the Russian ambassador. When Disraeli returns to his office, he finds Lady Clarissa and Charles Deeford waiting for him. Charles says that he thinks Foljambe knows of Disraeli's plans and that by this time Russia is taking action to counteract his movements. Disraeli orders Charles to take off immediately for Cairo and buy the canal shares before the Russian agents have a chance to bid for them. Deeford tells Disraeli why he thinks Foljambe knows the plans. . . .



9. Foljambe had seen Meyers leave Disraeli's office and had questioned Deeford. Deeford gave him no information; he merely snubbed Foljambe, staring at him with a surprised look.



10. Charles Deeford has Meyers' blank check and is ready to go to Egypt. Disraeli wishes him godspeed and tells him that Lady Clarissa will wait for him whether he succeeds or not.



11. Hugh Meyers appears with word that the bullion ship, bearing security for his check, has been sunk by Russian agents. Meyers is bankrupt, implores Disraeli to call off Suez deal.



12. Disraeli calls in Lord Probert (David Torrence), manager of the Bank of England, and bluffs him into signing a paper agreeing to honor Meyer's check when it comes through.



13. Disraeli's threat to take away the charter of the bank saves the day. The check used by Viscount Charles Deeford is made good; Deeford successfully completes his mission—returns. He wins the hand of Lady Clarissa. The last scene depicts the brilliant reception attended by Queen Victoria (Margaret Mann), an honor she paid Disraeli for his foresight in purchasing control of the canal and making her "Empress of India." Lady Beaconsfield recovers from an



illness in time to attend the great reception. Queen Victoria bestows a peerage on Hugh Meyers and Lord Probert. *Disraeli* was the first historically and technically accurate sound-movie biography. The relatively static pictorial quality of the movie was due in large part to the picture's emphasis on character delineation. The camera was focused exclusively on Arliss. Later sound biographies would handle action more flexibly.



Out of costume, George Arliss looked like many another West End actor off on a holiday. Except for a brief excursion into silent films Arliss' reputation was built on the stage. Until he was persuaded by Warners to make *Disraeli*, Arliss viewed the screen with suspicion. By the time he had completed several films, the old distrust disappeared, and he began to enjoy picture making. After years in the theater, it seemed like a holiday to go on location. He once said: "To be out all day in the pure air and sunshine of California, and to be paid for it, is an aspect of work which seems too good to be true." He made the transition from stage to screen more smoothly than most actors. To movie audiences, his gaunt, homely face became a fixture of the screen. Fascinated by his versatility they watched him play . . .



... *Alexander Hamilton*, against an austere background of colonial America and the Revolution.



... *Voltaire*, brilliant and witty French scholar, and *Cardinal Richelieu* (right).



Arliss' pioneering work foreshadowed biographies such as *The Story of Louis Pasteur* (above).



Made in 1936, this screen characterization packed a social message as well as strong entertainment values. Playing the part of Pasteur, Paul Muni (left) watches a photographer take pictures of newly inoculated sheep to be exposed to anthrax, a disease fatal to livestock.



Pasteur fights prejudice and ignorance in his struggle to administer serum to animals.



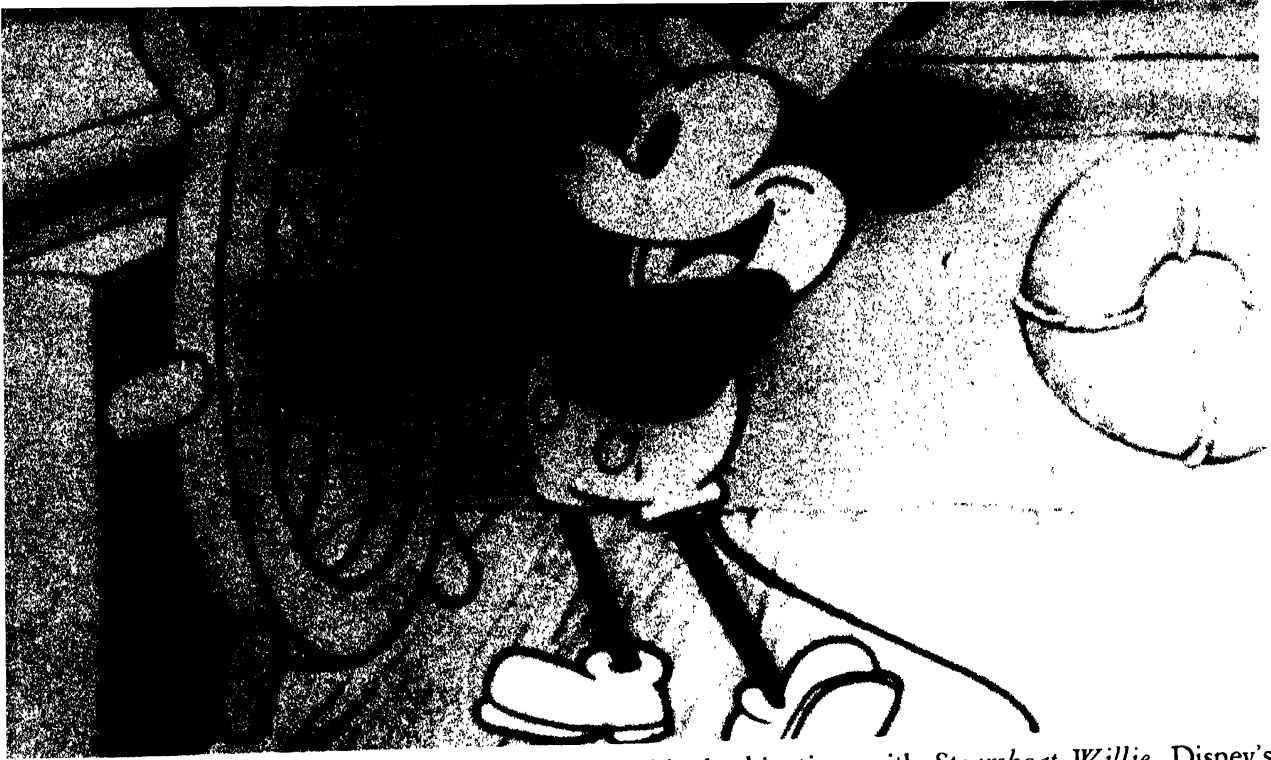
After his successful inoculation of the sheep, fellow scientists are forced to recognize him. However, they refuse to accept his rabies inoculation, and Pasteur almost dies before he and the world learn that the rabies experimentation has been successful.



Strange Interlude, co-starring Norma Shearer (left center) and Clark Gable, was a daring experiment in the dramatic use of sound. Not only did the actors deliver long speeches but verbal asides as well. Audiences were allowed to hear what went on inside the minds of O'Neill's characters. Coupled with the intense dialogue these asides left moviegoers exhausted.



The film and stage versions of *Private Lives* were as identical as the scenes above. Dialogue was reproduced exactly. The film was shot within the limitations of what amounted to a box set. Produced in 1931, it was a welcome relief to audiences who wondered if sound films would ever outgrow their labored dialogue. As an experiment in camera technique, it left much to be desired. Robert Montgomery and Norma Shearer (left) played their roles with the same wit and abandon as the original stage stars had. After three months on Broadway, Noel Coward and Gertrude Lawrence left the cast and Otto Kruger and Madge Kennedy (right) replaced them. *Private Lives* was one of the smash hits of both stage and screen during 1931.



Mortimer Mouse, later known as Mickey, hit the big time with *Steamboat Willie*, Disney's first sound animation. Hollywood could thank creator Disney for later advances in sound art.



Films like *The Front Page*, starring Adolphe Menjou, restored pace and action to sound movies.



And spontaneously funny films such as *It Happened One Night* demonstrated that sound could revitalize screen humor instead of strangling it. Claudette Colbert and Clark Gable got a boost up in the hierarchy of stardom. The film started a trend of sophisticated, informal, typically American comedies, something of a relief after years of slapstick.



Green Pastures, produced by Warners in 1936, was the first successful all-Negro film. Marc Connelly, who wrote the play, supervised Hollywood's version. Its sound possibilities were obvious, and Warners used a strong musical score based on Negro folk music. Gabriel and "De Lawd," up front, were the film's unforgettable stars. Despite the emphasis on music, sound was not used to anesthetize the camera, but to supplement beautiful photography.



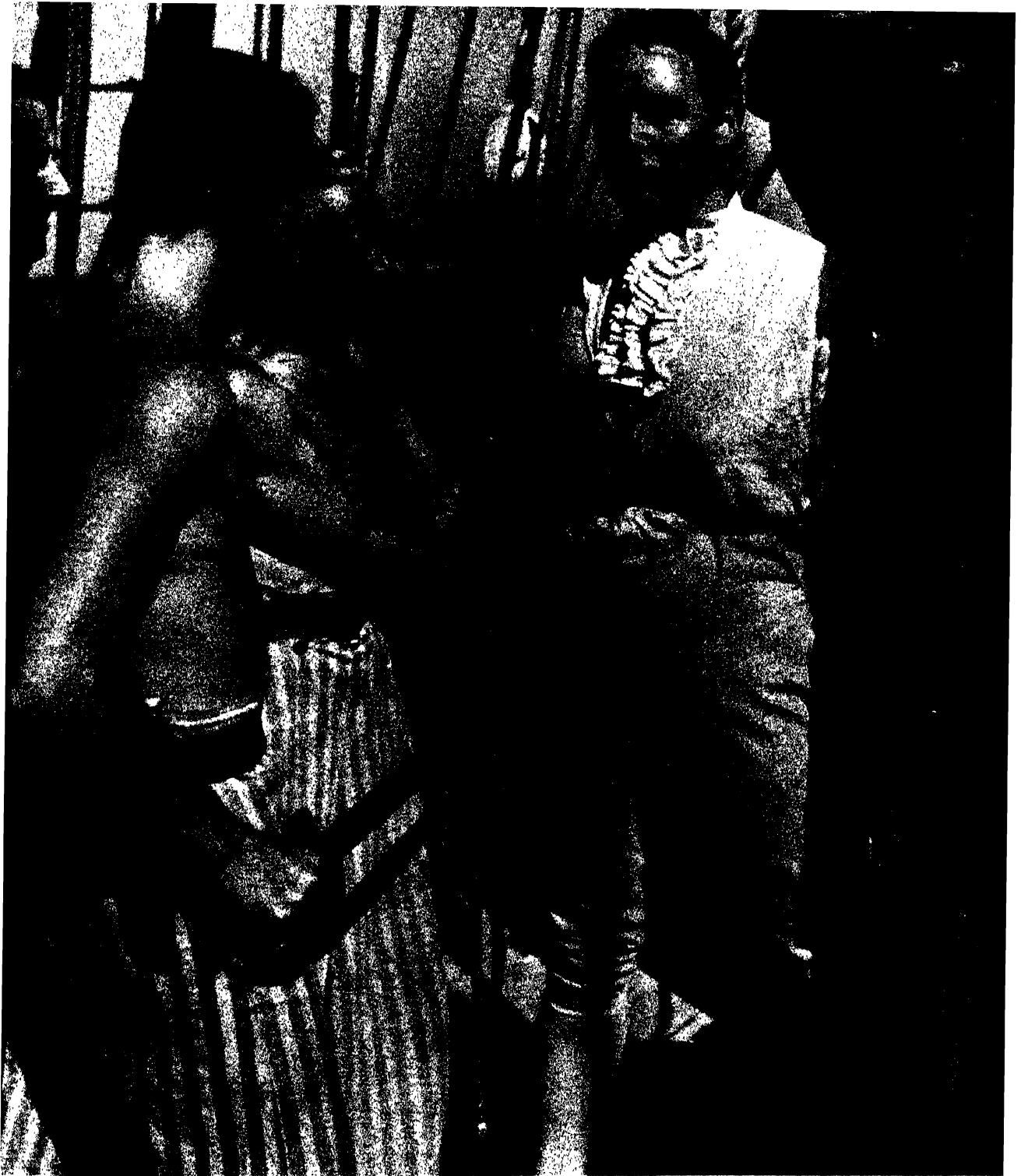
The same restraint was seen in *All Quiet On The Western Front* where dialogue had added dramatic effect because it was used so sparingly. This approach helped ease the transition period.



Sound films finally got out of the drawing room and into the open air with *In Old Arizona*. The first sound-on-film feature, it demonstrated sound's unrealized possibilities.



9 Victor McLaglen's open mouth signifies the dramatic use of sound, and the visual pattern implicit in the postures of his assailants represents the artistry which went into *The Informer*. John Ford set film standards which have rarely been matched in later movies. Max Steiner's score remains one of his most moving. The film achieved a synthesis of sound and action.



The picture which took the Academy Award for 1935 was a book adaptation, *Mutiny On The Bounty*. Here Charles Laughton is bound to the mast by his rebellious crew. Clark Gable, Franchot Tone and Dudley Digges also played in this MGM production. Their fine performances demonstrated the talkies' new dramatic power.



The Screen Speaks Out

THE NIGHT of January 15, 1920, was probably the wettest night of the nation's history. Millions of Americans bought out liquor stores, smashed bottles in the street, caroused with abandon, for on the next day, the country would go *dry*. Other, more designing citizens were laying their plans for the biggest cleanup in the history of gangdom. They had stacked away carloads of rye and gin, installed stills to turn out "whisk" which would blind and paralyze, and were standing by their Thompson submachine guns to give the law everything it asked for. The so-called crime wave which followed has been variously analyzed. Some sociologists attribute it to postwar restlessness and insecurity; but that many other factors contributed to its development, there can be no doubt. Certainly, the dislocating effect of the war years did much to shake traditional values. Prohibition was the torch that set off all the repressed impulses of many Americans. Secretly, they thrilled to the crime wave, which was being headlined not only by the American press, but wherever news was printed in the whole world. It offered glamour and excitement and color. But by the time the gangs were at their zenith, the public woke up to crime's devastating effect on society.

The prohibition period contributed to American history some of its most vivid language and legends. Wearing tightly belted polo coats, fedoras and high-polish shoes, the kings of gangdom drove brazenly about in armored cars and furthered their power through violence with tacit public approval. They were protected by corrupt politicians and officials. "Hush money" maintained them in great style and the speakeasies, frequented by millions of Americans, added to the take. Al Capone, "Legs" Diamond and "Dutch" Schultz were household names. Mr. and Mrs. America drank gin out of teacups, risked their necks as machine gun raked across Broadway and State Street, while a generation of children grew up fascinated by the gangster and his moll.

It was only natural that books and plays and movies would reflect this consuming public interest in gangdom. In 1924, the shot that killed Dion O'Banion, one of the first of Chicago's gangster barons, echoed around the world and set off a long series of sensational gang wars in the "Windy City." In 1926, when the O'Banion gang tried to blast Al Capone out of hiding in Cicero, Ill. with volleys from eight touring cars, a George Abbott play called *Broadway* opened in New York. Lee Tracy, later tough guy of the movies, was in the cast. *Underworld* was re-

leased the next year by Paramount. In 1928, production of crime films increased. *Dressed To Kill*, put out by Fox, *The Dragnet* and *Forgotten Faces*, by Paramount, were playing in neighborhood theaters.

Speakeasies became more than anonymous holes in the wall as prohibition wore on. They achieved individual personalities and were widely publicized. The point was not to evade the law but to flaunt it. Helen Morgan's 54th Street place was one of the better known "speaks," rivaled in notoriety by Texas Guinan's, the Club Richman and Belle Livingston's 58th Street place. There was the Bath Club, Ciro's, the Club Durant, the Lido, the Cotton Club and the Sutton Club. Libby Holman, Jimmy Durante, Rudy Vallee, Duke Ellington and a host of lesser lights were playing to packed clubs during the jazz age. Some customers carried shoulder holsters, most customers carried hip flasks and all tried to kill the taste of bathtub gin with ginger ale. Nobody could predict when the prohibition crime wave would end. It seemed to be gaining in fury. But even the most hardened hoodlum got a jolt when he read about the St. Valentine's Day Massacre.

This cleverest and most brutal act of violence perpetrated by the gangs occurred the morning of February 14, 1929. It happened in Chicago, most notorious, wide-open city in the country. A touring car pulled up to the S.M.C. Cartage Company, which served as a blind for the O'Banion gang. Five gangsters, dressed as policemen and plain clothes men, got out, disarmed the seven O'Banions who were waiting for a carload of contraband liquor, lined them up against the garage wall and killed the lot. The phony policemen walked calmly away from the scene without incident.

Dashiell Hammett wrote *Red Harvest* that year and W. R. Burnett did *Little Caesar*. They mirrored the ever-increasing public concern with crime. In October, the stock market crashed and attention was diverted momentarily to more catastrophic news. Submachine guns and armored cars faded in the public mind before floating ticker tape and wails from Wall Street. Not until the true effect of the crash was felt did the roaring twenties wind up their brief hour in one final burst of whoopee.

Broadway was still producing plays which came right out of the headlines, and Hollywood was catching up to them. A scout from Warners happened to see a show on Broadway called *Penny Arcade*, was so struck by its movie possibilities that he bought the screen rights and contracted two of the actors. These young kids—Jimmy Cagney and Joan Blondell—who had had only bit parts in the stage show were destined to play a gangster and his moll in more than one movie. Going west with only one film in mind, they stayed to become Hollywood fixtures. Warners adapted *Penny Arcade*, retitled it *Sinner's Holiday* and released it in 1930. That same year, they cast Cagney, Blondell and Lew Ayres in *Doorway to Hell*. Also in production at Warners was *Little Caesar*, featuring Edward G. Robinson in his first big role. Adapted from W. R. Burnett's book, this film was almost documentary in its realistic portrayal of the crime wave. It did not romanticize the problem or moralize. It didn't have to. The lesson was inescapable. This factually dramatic portrayal of the social scene did more to shock Americans into some semblance of a social conscience than a decade of preaching and editorializing had been able to do.

The overwhelming acceptance of *Little Caesar* by the public justified Warners' practice of drawing story material from the headlines of the day. Cinema realism was in its infancy, but it gave promise of shaping the movie into a powerful social force as well as an entertainment medium. The addition of sound had not wrought an overnight change in film content for there had been many silent films which attempted to get across a social message. But sound gave the film urgency, impact and immediate realism. Audiences were very often able to single out specific incidents which had been fictionalized only slightly by screen writers. *Scarface*, made by United Artists in 1932, was said to be the true biography of Al Capone, recognizable to a million Americans.

Producers spared no realistic touches in this cycle of films. The machine guns, the smoky saloons and nightclubs, the sharply-tailored clothes of gangsters fresh in the money—and all the tawdry trappings of the gangster's environment were pictured with exacting detail. This painstaking fidelity to fact profoundly influenced the progress of film realism as far as decor and costuming went.

Sound effects completed the realism. Audiences could hear the machine gun bullets raking across the street. They thrilled when powerful black limousines roared down the Great White Way. One focal scene in *The Public Enemy* depended completely on sound. One gang hired a coal truck to back up to the apartment house in which a rival gang was hiding. When the rival gang tried to make its escape and was caught by machine gun bullets, the coal-unloading effectively muffled the gunfire.

The Public Enemy, produced by Warners in 1931, starred Jimmy Cagney and Jean Harlow. It came out forcibly for civic action to stem the crime wave. The picture itself was a powerful indictment of social forces which breed crime, a telling case history of an average American boy who grew up to be a gangster. The producer's note at the end of the film confirmed its thesis—"It is the ambition of the authors of *The Public Enemy* to depict honestly an environment that exists today in certain strata of American life, rather than glorify the hoodlum or the criminal."

The gangster-film cycle ran its course when the prohibition crime wave subsided. It did much to awaken a paralyzed public to the need for some kind of concerted civic action. It demonstrated the talking film's power as a sociological force. It stepped up the pace of sound films and clipped verbose dialogue off the sound track. It brought to the public eye actors like Jimmy Cagney, Joan Blondell, Jean Harlow, Edward G. Robinson, Lee Tracy, Glenda Farrell, Clark Gable, Spencer Tracy. It created a new movie type who playfully socked his girl across the jaw or smashed a grapefruit into her face. Furthermore, it proved that far from being withdrawn from the contemporary scene, Hollywood wanted to reflect it. Like any healthy art, the movies had to participate in life to survive.

As soon as the effects of a nation-wide depression were felt, the shaky morality of the glittering twenties crumbled. Instead of sophistication there was poverty, instead of night clubs there were breadlines, instead of optimism there was defeat.

The films stepped in and walked where more timid men feared to tread. They rooted out and publicized some of the causes of social evils which had ridden in on the heels of gang-

dom. *Wild Boys of the Road*, a Warner picture released in 1933, showed with appalling realism the effect of the depression on youngsters forced to leave home to get work. Scenes on the freight cars, where boys and girls huddled together for protection against an unfeeling world, were remarkable for their vigor and emotional content. Again the film refrained from moralizing. It simply let audiences draw their own conclusions. This was not a sensational handling of the juvenile delinquency problem, but a sincere effort to help the nation understand the behavior of certain young Americans who were forced to live on the fringe of society. *Dead End*, produced by United Artists, *Boys Of The Streets*, *The Devil Is A Sissy*, released by MGM, and *Crime School*, another Warner picture, carried the same message. *Gentlemen Are Born*, made by Warners in 1934, followed the careers of four children of the depression who are graduated from college and are forced to abandon their training and ambition to earn a scant living. This film attempted more than reporting of existing conditions. Without editorializing, it flashed back to remind audiences of past events which had bred the social dislocations of the day.

These documentary-type films proved that the public could take enlightenment with entertainment—and like it. *Wild Boys of the Road* was not only a film philippic against a social evil, it was good box office. The motion picture industry learned that the public liked plain, straight talking out.

But the movies did more than probe and report the depression. They entertained the public—still their primary job—and tried to make it forget its troubles.

A new musical comedy, *42nd Street*, set off another cycle which helped convince Americans that prosperity must be just around the corner. To prove it, the Warners sent out a train, The 42nd Street Special, loaded with high-salaried material like Bette Davis, Joe E. Brown, Helen Vinson, and preceded by Tom Mix and his horse, King. The train traveled across the continent starting from Hollywood. It optimistically brought hope for a new and prosperous era at a time when businesses were failing and banks closing. The cross-country tour, ending in Washington, started the publicity junket trains for *Dodge City*, Victory Loans, Bond Tours, etc. Despite a then current prejudice against musicals, Warners had decided to do one. They hired Al Dubin and Harry Warner to do some lyrics, adapted the book slightly, cast Warner Baxter as the dance director and Ruby Keeler as the extra who steps into the leading lady's shoes and makes good.

The strides that had been made in musicals were noticeable in this new cycle. When sound first appeared, there was a run on musicals, then regarded as the only "safe" way to exploit the new medium. These new musicals of the thirties bore little resemblance to the "static" revues of less than a decade earlier. There was the added element of story continuity, but most important, the camera created a visual pattern which complemented the musical one. Imaginative production numbers where the camera cut across the sets, combining as many elements as possible—as freely as possible—became the formula for musical comedies. The audiences delighted in the glitter and spontaneity—a far cry from the grim actuality of breadlines and suicides.

Social and economic actuality was violent during this critical period and films were thrown into the controversy headlong. It was baptism by fire. With the new tool of sound at their disposal, movie producers did not shy away from portraying America as it looked to the naked

eye. The new dramatic impact of the screen, which came with the arrival of sound, provided the technique. The living social scene provided the content. These films were no sociological tomes, admonishing, moralizing, rationalizing. Instead they were fast-paced, vigorous, usually accurate dramas. The scene and its characters were unmistakably American. They helped stimulate public opinion, compelling it to re-examine values which seemingly had been laid aside during the depression.

Film producers, then and now, will insist that they make pictures for box office, not social significance. What they do not explain is that when story material is handled properly the two are mutually dependent. The film industry is not out to save the world, they repeat, only to furnish entertainment. However, proof that the screen is not unaware of contemporary life, in fact glories in it, may be traced in the history of the film.

I Am A Fugitive From A Chain Gang stimulated tremendous social action on behalf of chain gang prisoners in the south. *Black Fury* treated of strikes among mine workers and *Black Legion* handled the explosive subject of the Ku Klux Klan. *The Life of Emile Zola*, starring Paul Muni, was taken from yesterday's headlines, but the moral of the Dreyfus Case could have been applied to social injustices of the thirties. *Winterset*, adapted by RKO from Maxwell Anderson's dramatization of the Sacco and Vanzetti case, struck out at legal injustice, and *Fury*, produced by MGM, carried an anti-lynching message.

Motivated by the knowledge that headlines are sure box office, the screen took on a truly journalistic flavor shortly after the advent of sound. The sound track made faithful reproduction of the social scene possible and increased the range of screen material. Yet Hollywood put more than a price tag on news values. It assumed a responsibility toward the public, a trend significantly shown in short subjects as well as feature films. This tremendously effective social force could easily be used to exploit or color popular issues. Instead, Hollywood in its documentary-type films utilized the screen to mirror life as it was, not as it seemed to be. In these films, the screen tried not to slip into a fantasy world. It faced controversial subjects honestly and objectively. It spoke out—and it is still speaking out.



The crime wave reached its brutal climax in a bare, cement garage on Chicago's North Clark Street on February 14, 1929. Here is the O'Banion gang crumpled against the wall, done in by the submachine guns of a rival gang. The St. Valentine's Day Massacre struck a body-blow at American indifference toward gang rule. A cycle of crime films helped finish the job.



1. *Public Enemy* traced a pair of gangsters from boyhood. Frankie Darro (left) played Matt Doyle as a boy and Junior Coughlan (white shirt, right) was young Tom Powers.



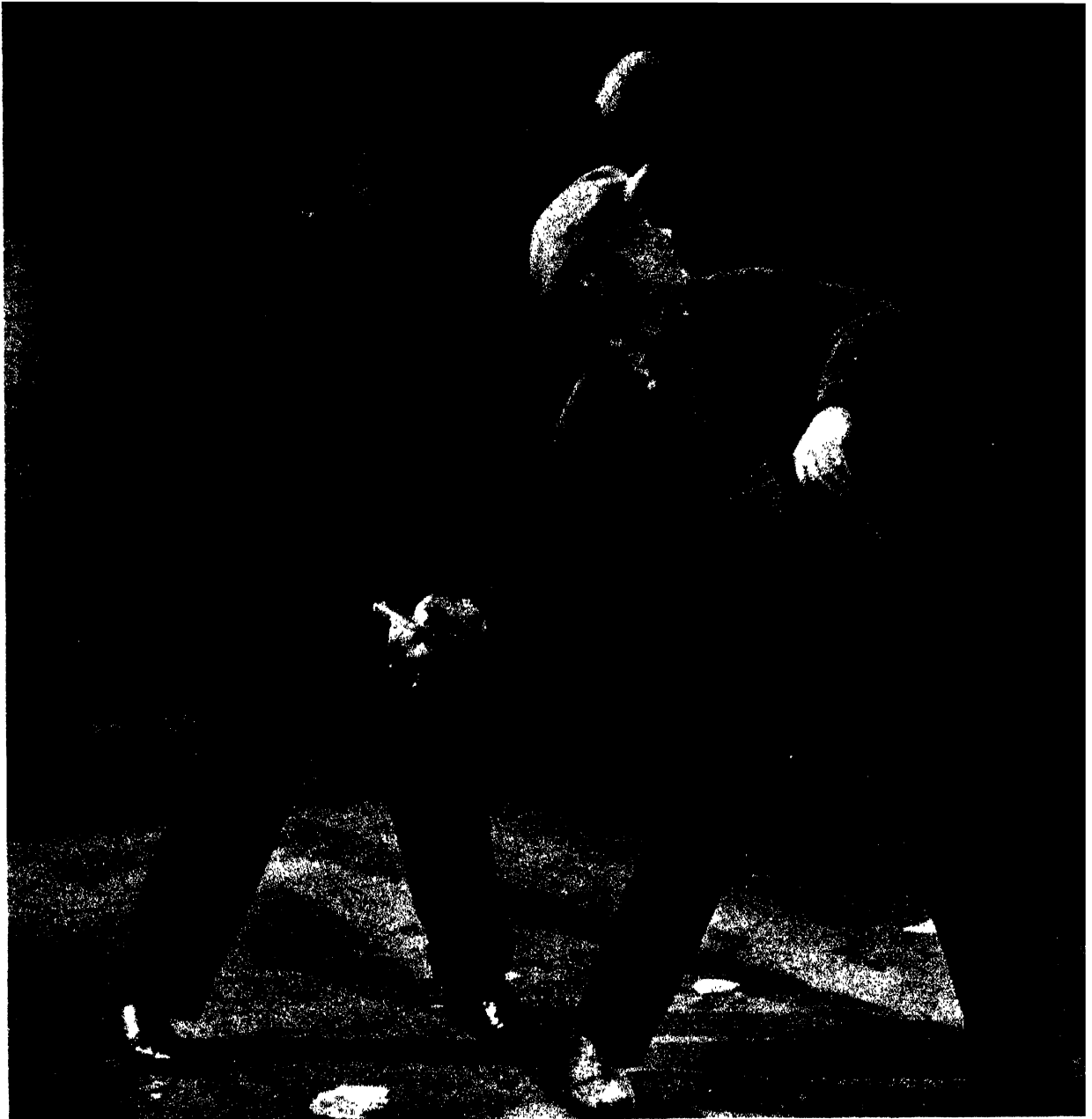
2. Young hoodlums of the neighborhood meet at their clubhouse to turn in stolen goods for cash. Putty Nose, at the piano, handles these transactions, grooms the embryonic criminals.



3. When Tom (James Cagney) and Matt (Edward Woods) grow up, Putty Nose picks them for a really big job. Furnishing the guns, he sends them off to rob a fur warehouse.



4. An accomplice is stationed outside the warehouse to intercept the watchman. Tom and Matt break into the building, almost give themselves away with a glaring flashlight.



5. As they make their getaway, the inexperienced criminals hurl their guns over the warehouse roof and make for Putty Nose's hideout. Tom had fired in fright and these shots "tip-off" the police. The accomplice is killed, and Tom and Matt escape under cover of his gunfire. Putty Nose has instructed them to bring the loot to his hideout, but when they get there, they find he has skipped town. Tom and Matt swear they will make him pay for betraying them. This lawless excursion made the boys think it was easy to steal and get away with it. Next time, they would not be so careless. Next time, they would bring back the loot. They both had good jobs by now, but the lure of easy money was too strong, and they were ready for anybody with an idea. Paddy Ryan, the saloon keeper, became a "fence" for the stuff they stole. He had bigger ideas for them, and when prohibition arrived he took Tom and Matt aside to show them how they could take the public for a ride.



6. While Tom was cleaning up in the underworld, his scholarly brother Mike (Donald Cook) went to school at night, worked during the day. Here he packs, preparatory to enlisting.



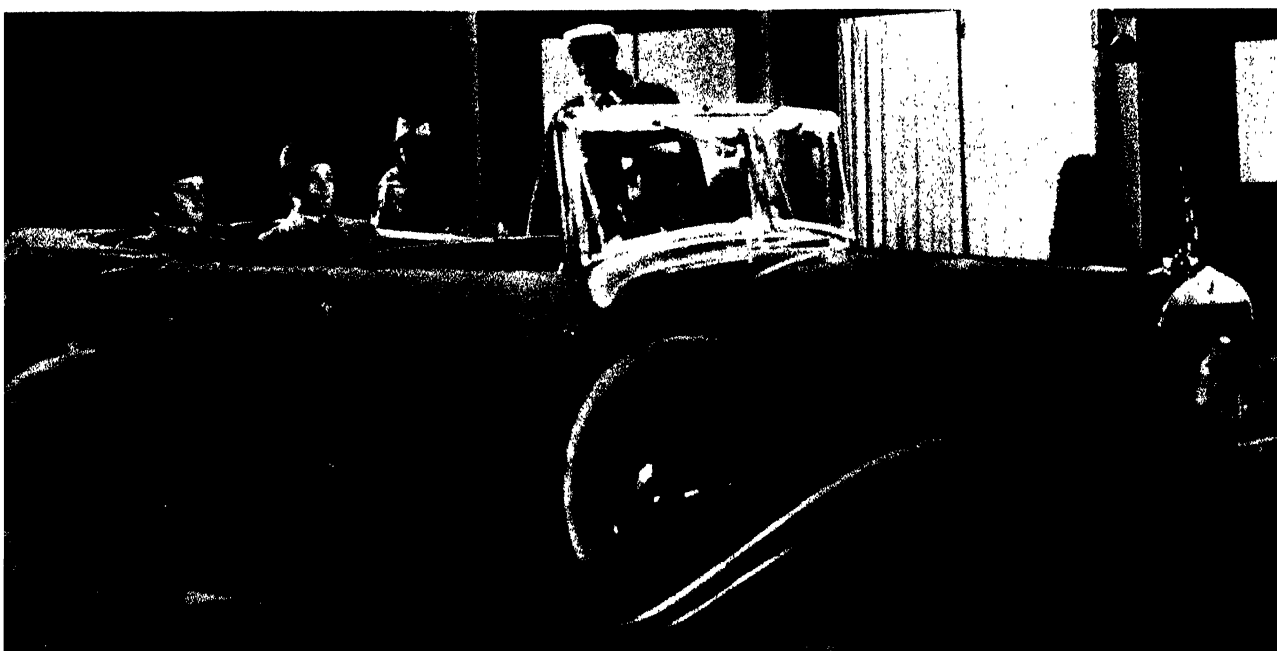
7. Prohibition meant more money for Tom and Matt. Paddy Ryan (right) introduces them to Nails Nathan, big-shot bootlegger. The gang plans to boost sales for bootleg beer.



8. They drive their gasoline truck up to liquor warehouses and siphon off the whiskey. Occasionally they run into trouble, but the butt of a gun or a clenched fist solves that.



↑ 9. Saloon keepers were intimidated by their roughhouse methods. If speakeasies bought beer elsewhere, they soon felt the iron fist of the gang.



10. Racketeering and bootlegging paid off, and the boys came up in the world. They bought themselves a heavy cream-colored sedan and began affecting derbies and polo coats.



11. Matt meets a cute blonde, Mamie (Joan Blondell), in a nightclub, and Tom half-heartedly falls for her best friend, Kitty. They are riding high, wide and handsome at public expense.



12. Tom smashes a grapefruit into Kitty's (Mae Clarke) face. This kind of love team was dynamite for fans who love Cagney and his sock-in-the-jaw brand of romance.



13. Mamie and Matt get married, but Tom can't get anywhere with his own moll. He drops the mistreated Kitty for an unresponsive, blonde-bombshell, Gwen (Jean Harlow).



14. When Mike Powers returns from the war, a policeman tells him what Tom and Matt have been up to. Mike forces Tom to leave home, refuses his money for their mother's support.



15. While Tom is busy trying to persuade Gwen to give him a break, Nails Nathan, the leader of the gang, is killed. The boys are now in danger of their lives from rival gangsters.



16. They had run into Putty Nose just a few weeks before in a nightclub and paid off an old score by rubbing him out. Now they had to hide out to escape a similar fate.



17. Deceived by the apparent inactivity of the rival gang, Matt and Tom sneak out of hiding only to be shot down by a concealed machine gun. Matt is killed instantly.



18. Tom gets away and goes after the gang who killed his pal. He is wounded, taken to a hospital, kidnapped by his enemies, killed and delivered to his brother, plaster-cast and all. Audiences winced as screaming bullets seemed to come off the screen and Cagney's corpse thudded in the doorway. Sound had given the screen a vivid reality. *Public Enemy* was more than a portrait of organized crime. It attempted to probe the basic reasons for this mass violence. Parents began to look into the questionable influences working on their children. Schools and churches took a more realistic view of crime and instead of merely censuring its practitioners, set about to catch it at the root. There was less moralizing and more constructive social action. The wave of crime films certainly helped shape a new and pragmatic approach toward murder, theft and bootlegging. Americans stopped shrugging their shoulders with a "what can you do about it" attitude. They could see on the screen how a criminal was developed. Once they knew what they were facing, they had the courage to do something about it. Civic groups took action. Playgrounds were built to get children off the streets, group activities for teen-agers were initiated, juvenile courts multiplied. While film goers watched screen gangsters at work, their real-life counterparts terrorized the nation. . . .



Some gangsters, like Dillinger (center), were captured, let loose or escaped, later killed.



It took longer to trap the Lindbergh kidnaper who used this fatal ladder at Hopewell, N. J.



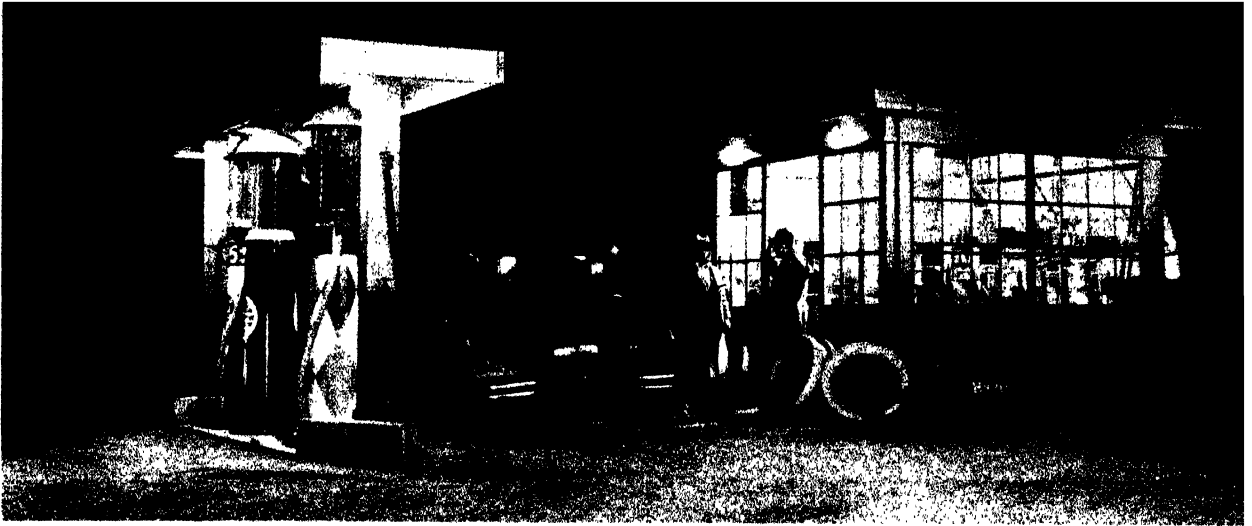
Al Capone, notorious Chicago gangster, went off fishing, contemptuous of the police.



And "Pretty Boy" Floyd met a violent end as one of the last survivors of the gang age.



Doorway To Hell, one of the early crime films, featured Lew Ayres (left) and James Cagney.



In this hold-up scene from *Little Caesar*, Edward G. Robinson is about to take the filling station attendant for all he's worth. The film was remarkable for its rich and accurate flavor of the underworld. Mervyn LeRoy spent weeks actually living among gangsters in Los Angeles.



Edward G. Robinson gets his in the end. Like many another criminal, he couldn't beat the rap.



Five Star Final was another tough, hard-hitting crime movie, starring Edward G. Robinson. Warners released it just two months before Capone was sentenced.



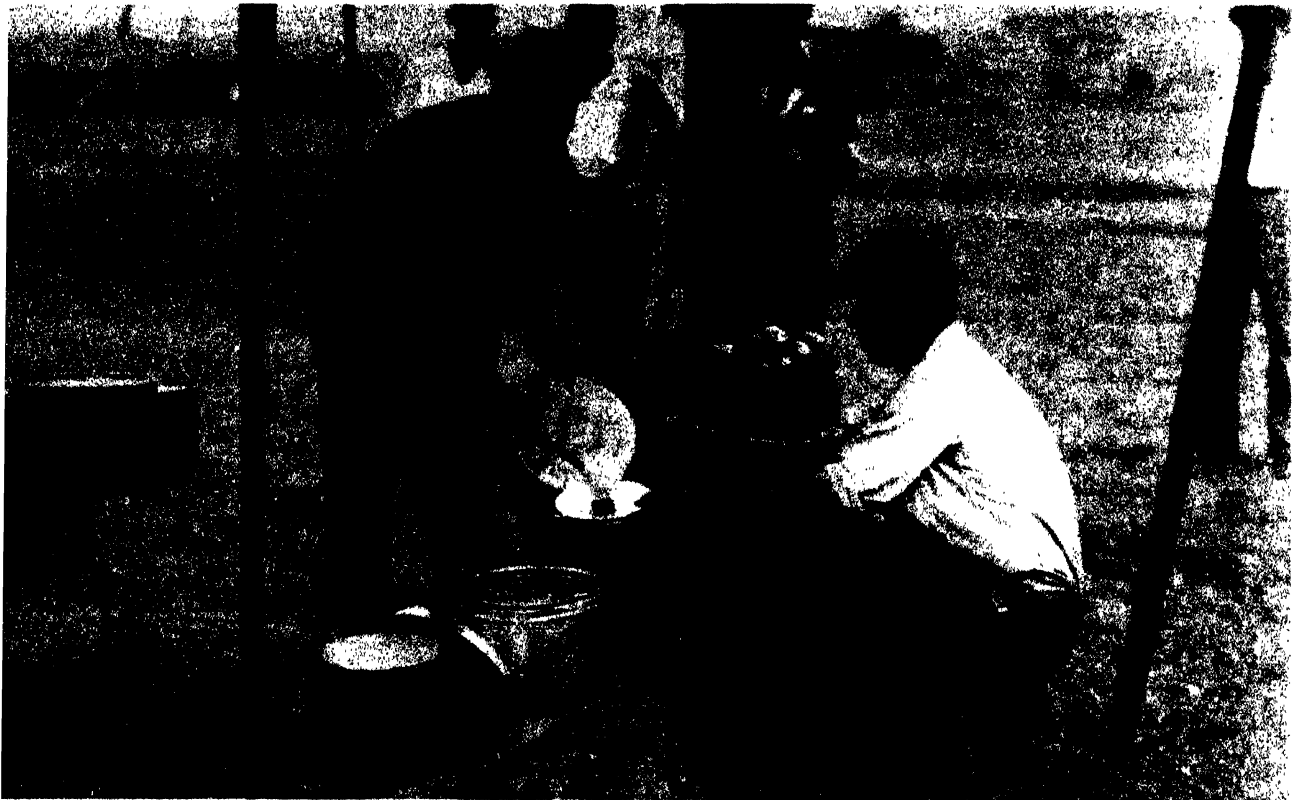
Scarface, produced by United Artists, starred Paul Muni. It capitalized on the public interest in Capone's arrest and conviction. There was a resemblance between Muni and Capone.



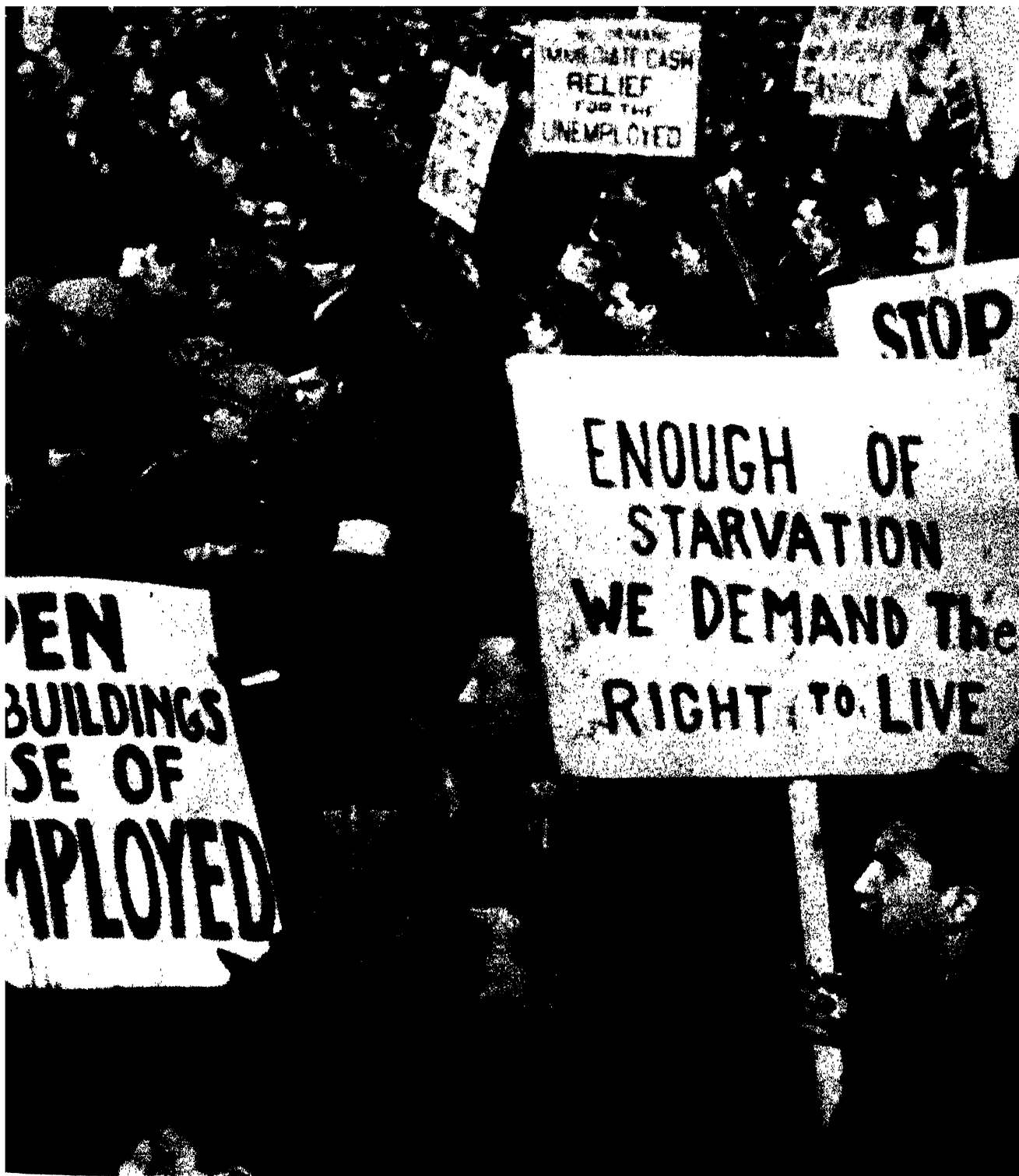
Bank robbers make their getaway with the FBI close behind. *G-Men*, released in 1935 at the end of the crime cycle, was a film with a new twist. It personalized the law instead of the criminal. Like other Warner films, this one came right out of the headlines. A feature on the FBI in the *New York World Telegram* called Jack Warner's attention to it and the movie was born. Instead of playing gangster, small boys began playing gang-buster. The G-Man became their idol. The depression fathered two other movie "cycles"—first of which was the modern musical. Song and dance pictures had been made before 1933—*Gold Diggers of Broadway*, *Rio Rita*, *Broadway Melody* and others—produced late in the mad but glittering twenties. The public, however, had tired of these musicals which were, for the most part, loosely assembled collections of vaudeville acts held together by thin plot threads unenhanced by the variety of sets and camera mobility which were to be developed later. Such techniques had arrived by the time America reached the bottom of the depression. The time was ripe for a return to light musical entertainment which would divert people from the worries of hard times, job-hunting, debt, hunger. . . .



Jobless men were eking out a "living" by selling apples on the streets.



The Bonus Army was living in shacks and eating on the dole at Anacostia Flats in Washington.



Hunger marchers paraded in the big cities, and as factory after factory closed, poverty stalked the land. And, as always in the history of hard times, the people demanded a change. They got it with the election of Franklin D. Roosevelt. They got it, too, in screen entertainment, with the production of a musical film which was to set a pattern for a new, more modern, song and dance cycle—*42nd Street*.



42nd Street had dramatic impact and an effective story as well as songs and dances.



It provided laughter, song and a heart-throb for Americans caught in the grip of a great depression. Extravagant production numbers like this one, catchy songs and pretty girls helped carry the nation out of its gloomy mood and set it on the road to recovery.



The *42nd Street* train was more than a publicity gag; it helped the nation out of its doldrums.



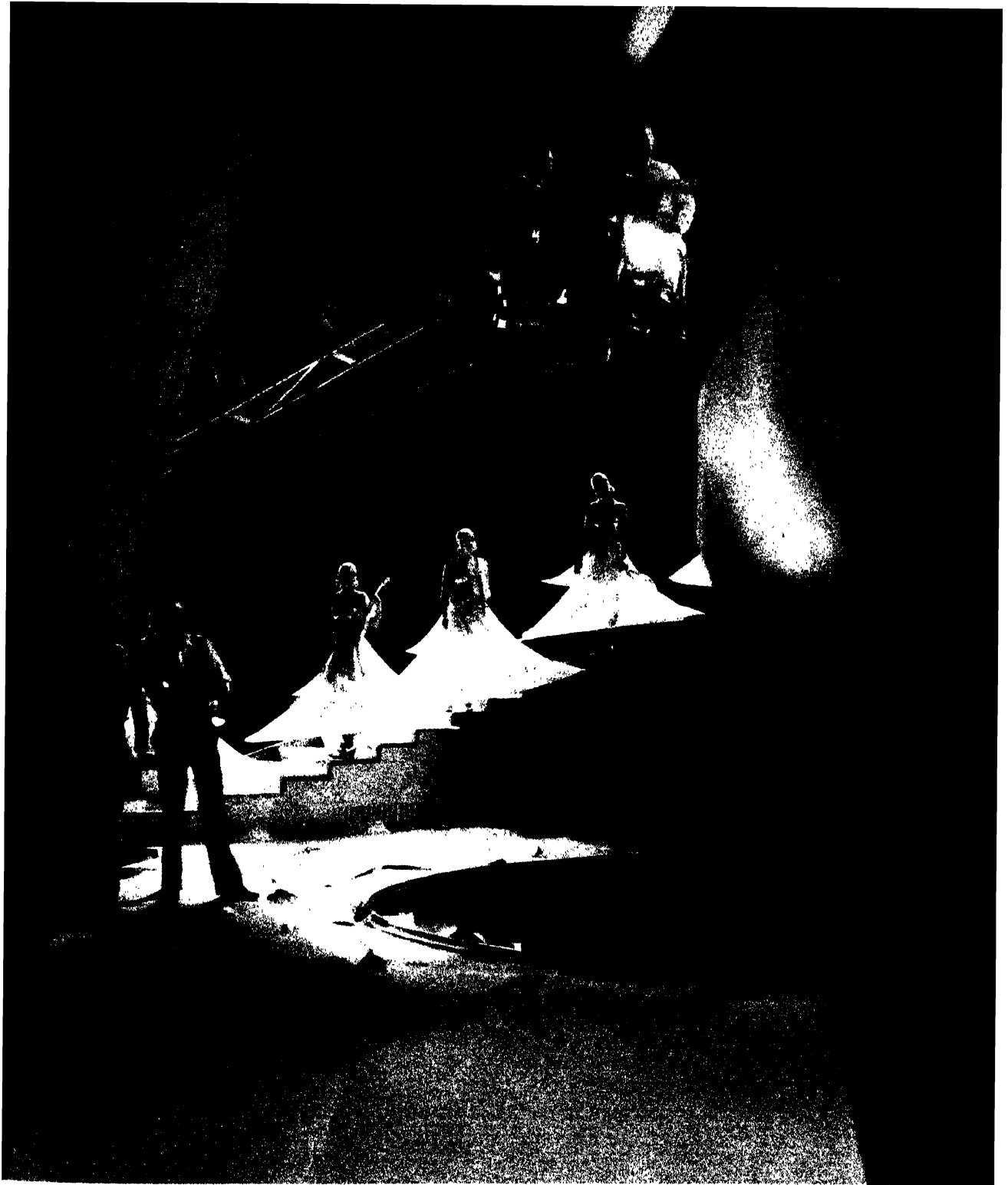
Traveling across the country in the midst of a bank holiday, Warner executives and stars were forced to raid box office cash boxes to keep the caravan rolling. Nobody had any money but everyone was optimistic for the first time since the depression struck the nation.



Gold Diggers of Broadway, released in 1929, had all the earmarks of that roaring decade.



Fortunately, moviegoers had something to laugh at and show them there was a sunny side of the street during depression days. Made by Warners in an era of prosperity, *Gold Diggers of Broadway* did its bit to boost the national morale when the true effect of the crash was felt.



Gold Diggers of 1933 featured even more elaborate sets and numbers. Another backstage musical, it paired Dick Powell and Ruby Keeler to the delight of fans everywhere. Note the roving camera which gave these musicals the pace and action earlier ones had lacked.



The second movie "cycle" to come from the breadlines of depression was the social documentary-type of feature film. As men wandered around the country seeking work, homes were broken and families separated. Children left school to find jobs and aid their parents. The



movies were not slow to recognize the dramatic possibilities and the social significance in such conditions. The film now became a reporter on social problems other than crime. One of the most forceful pictures of this type was *Wild Boys of the Road*.



Wild Boys of the Road was the story of vagrant youths who huddled together in box cars, riding the rails away from their families who had been impoverished by the crash and depression.



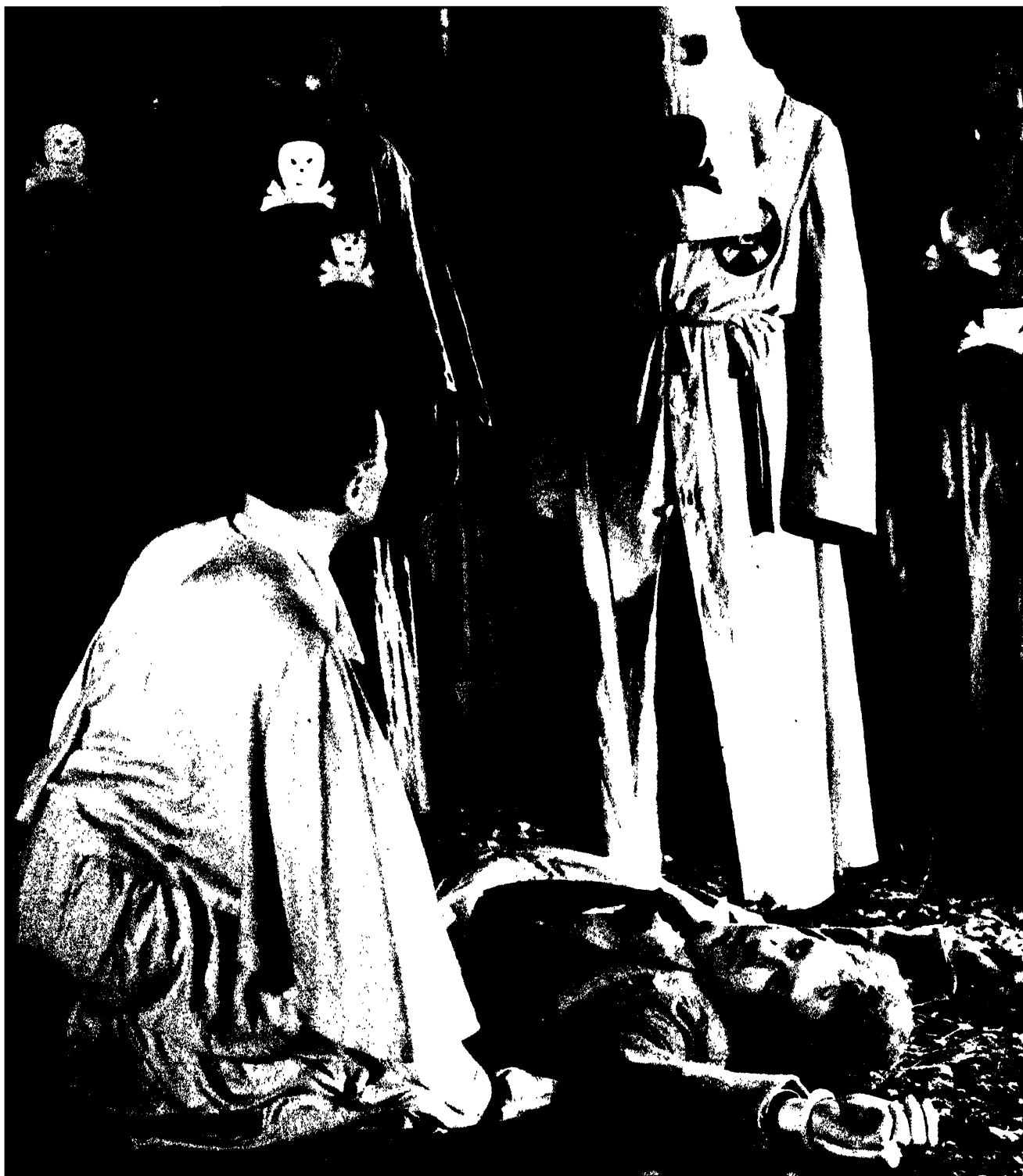
They fought off railroad detectives who tried to throw them out of the box cars, kept alive through youthful resourcefulness and grew up fast, bumming their way across the country.



Learning things they never should have been exposed to, they experienced fear and naked terror. Girls ran the greatest risk although they were protected through group vigilance.



The gang exacted its due from any one who threatened the safety of the herd. It was not a pretty story, but it needed telling and undoubtedly had an effect upon social action.



Black Legion was the story of another kind of violence, that which respects only bigotry and authoritarianism. Humphrey Bogart and Ann Sheridan were co-starred in this film about pressure groups and ritualistic organizations which play upon the average American's latent hostilities until he loses all reason and identifies himself with the mob.



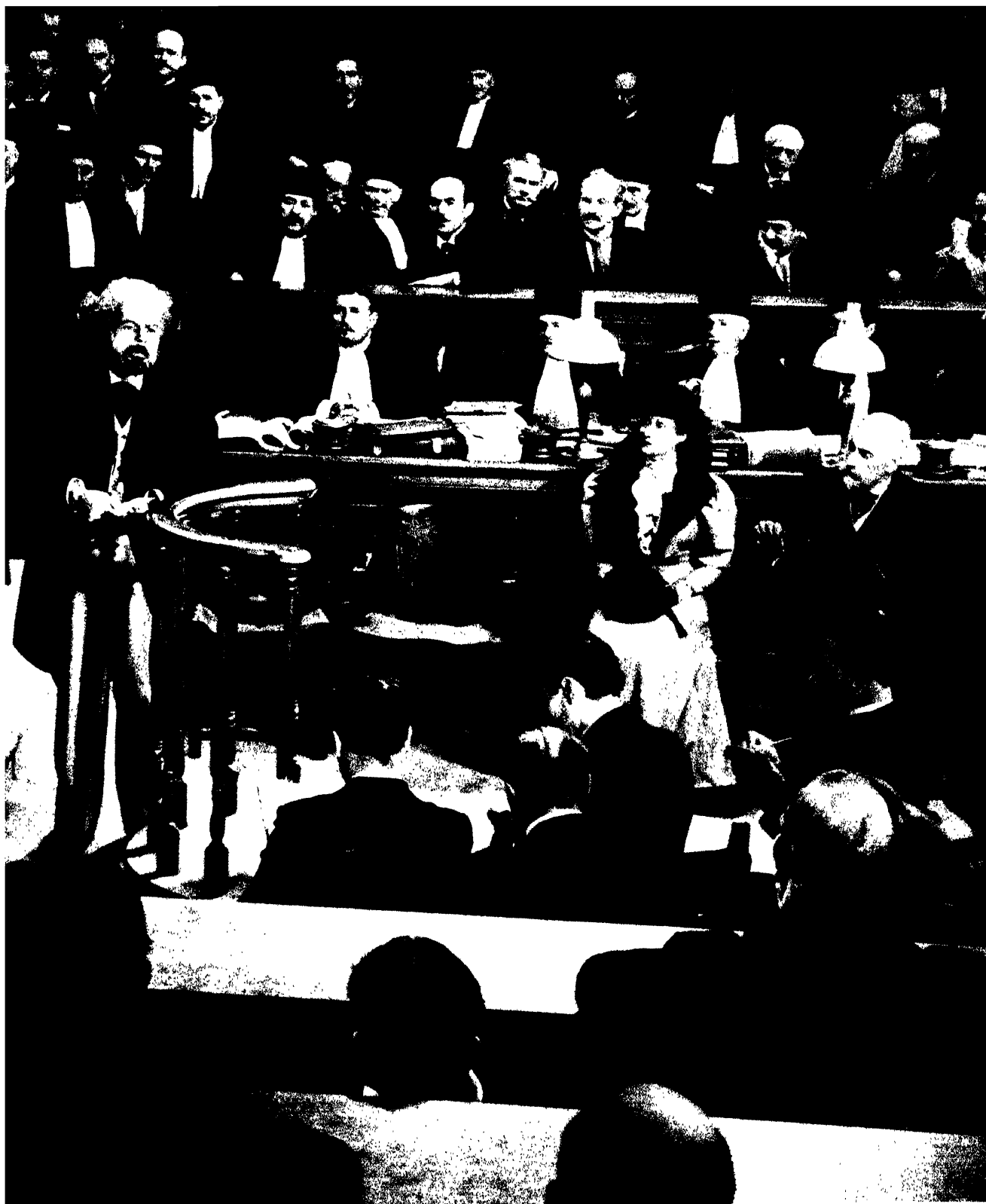
I Am A Fugitive From A Chain Gang, starring Paul Muni (left), exposed the brutality of chain gang life and the fate of prisoners who try to escape and start over under another name.



Black Fury treated the explosive subject of labor unions. The scene was laid in a coal mining town where the workers have gone out on strike. Paul Muni was featured as their leader.



Warners' *The Life of Emile Zola*, with Paul Muni (center) playing the title role, was an effective plea against social intolerance and injustice. With its emphasis on Zola's novels, the



film anticipated another movie trend which would picturize classics and best-sellers. Producers would find ample material in literature to demonstrate the artistic and social strength of movies.



CHAPTER SIX

Shakespeare to Main Street

MAX REINHARDT, famed Viennese producer of *A Midsummer Night's Dream*, never imagined that his brilliant treatment of Shakespeare's comedy would ultimately reach thousands of Americans via the silver screen when his company played the Century and Cosmopolitan theaters here in 1927-28. He was less incredulous after presenting it in the Hollywood Bowl in 1934. He found that drama lovers are much the same anywhere, and these Californians were as enthusiastic over the lavish sets, high comedy and lyric passages as Oxford and Berlin audiences had been.

The Warner brothers saw Reinhardt's production and realized its screen possibilities. Sound pictures had reached such a stage of perfection by 1934 that this undertaking did not look as overwhelming as it might have five years earlier. In fact, *A Midsummer Night's Dream* seemed ideally suited to the new technique which had rejuvenated the industry. Shakespeare's lines could now be reproduced through sound. And the play possessed pictorial values as well as literary ones. Millions of Americans who were acquainted with the comedy as a literary curiosity, or had seen crude amateur performances, could now witness one of the spectacular productions of all time. The Warners' decision was prophetic. This would be Hollywood's first successful attempt to adapt Shakespeare, and it inaugurated a cycle of great screen adaptations. The public would be introduced to the finest writers of all time in their neighborhood theaters. They might buy tickets to see Ronald Colman, but they would leave with an interest in Charles Dickens. School children and college students found these screen adaptations invaluable aids in studying Shakespeare and other classics. "I haven't read the book yet but I've seen the movie" became a standard American retort.

Reinhardt was given a free hand with *A Midsummer Night's Dream*. The ballet was directed by Bronislava Nijinska, sister of the great Nijinsky, and Ballet Maestra of the Paris Grand Opera. Erich Korngold arranged Mendelssohn's immortal music, without, incidentally, distorting it into one of those hybrid "arrangements" of classics so popular now. Korngold actually "fitted" Mendelssohn's original score to the picture. James Cagney, Joe E. Brown, Mickey Rooney, Hugh Herbert and Frank McHugh slipped into grotesque costumes appro-

priate to the comedy. Dick Powell and Olivia de Havilland carried the romantic leads. Sound played an original and effective role in the production. Al Dubin wrote Jack Warner: "It also occurs to me that if Reinhardt were ever to make a modern musical it would top anything that the industry has ever seen before. The one bit where the goblin band plays the 'vroom-vroom' strain which is cut back to every once in a while, shows possibilities untouched up until now in modern musicals."

The slightest detail was worked over by Perc Westmore's make-up department under the supervision of Reinhardt. Puck's tail, Bottom's donkey head, Oberon's crown, 50 pairs of bats' wings, were jobs foreign to the orthodox studio make-up crew. But they were handled with imagination and artistry. Costume material was ordered from Europe, thousands of accessories were tailor-made for the film, engineering effects were painstakingly devised and executed. When the film opened at the Adelphi and Strand on October 9, 1935, another milestone in the history of sound movies was passed. The *New York Evening Journal* raved: "*A Midsummer Night's Dream* is exquisitely beautiful, enchanting both to see and to hear. In its thrilling spectacle, its brilliant use of music, its superb blend of poetry, drama, orchestration and choreography, the picture translates Shakespeare to the medium that can best do justice to the greatest playwright of them all. Certainly no stage, limited as it is, can interpret the imageries of Shakespeare in the manner possible to the limitless screen." *Motion Picture Daily* said: "*A Midsummer Night's Dream* starts what properly should be a cycle and starts it intelligently and well." The boys from Baltimore, Pittsburgh and Youngstown were the first to present this classic in the one medium which could best capture its high artistry and imagination.

These were prophetic words. The next year Irving Thalberg presented his wife, Norma Shearer, and Leslie Howard in *Romeo and Juliet*. None of the lyric beauty of Shakespeare's lines was lost in this painstakingly accurate screen adaptation. On the stage these intimate love scenes could not be whispered naturally, but had to be declaimed so that the top balcony could hear every syllable. The sound film made it possible for Romeo to murmur "sweet nothings into her ear," not shout them, with every member of the audience feeling as close to the lovers as they are to each other. Another improvement of this screen version over stage presentations was physical reality. Instead of being crudely suggested by stage lighting and props, the balcony and plaza could be reproduced life-size, thus intensifying the dramatic action which took place on them.

Shakespeare was a natural choice for screen adaptation. His speech was as visual as his staging. The color and spectacular quality of these 16th century plays were intensified through camera treatment. And a basic structure was there which no scenarist could improve on.

Encouraged by the public reaction to *A Midsummer Night's Dream* and *Romeo and Juliet*, producers and writers cast about for novels which would hold up under screen adaptation. Many of the best-loved works of fiction would not do because they lacked pictorial values, were too limited in action or could not be telescoped into two hours of screen time. But as the studios went through the list of best-sellers and classics, producers were struck by the number which not only would do for the screen, but which would be enriched by sound film treatment.

Becky Sharp, the film version of *Vanity Fair*, was presented by RKO in 1935. Besides demonstrating a mature sound technique, it featured lavish use of Technicolor. The same year came MGM's production of *David Copperfield*. This Dickens novel made better screen fare, perhaps because of its varied and colorful characters. Certainly, the camera's treatment of a small boy's confusion and insecurity more than matched the original description. The film cut back and forth as he was knocked down in city streets, lost in a rainstorm and generally buffeted about in an adult world. The massive research that went into this picture, like that for *A Midsummer Night's Dream*, contributed to the film's effectiveness. Audiences, who may have skipped over pages of descriptive fiction, now saw the scene as Dickens envisioned it. Dialogue which may not have been fully appreciated in print now took on color and vitality as the spoken word. A second Dickens novel was brought to the screen by MGM in 1935. Audiences will long remember Ronald Colman's, "It is a far far better thing I do . . ." as he stood on the guillotine in *A Tale of Two Cities*. Again the sets were historically accurate. Again the camera and sound track enhanced fictional values.

A memorable and imaginative screen adaptation was *Wuthering Heights*. Based on Emily Bronte's novel, this film play, written by Ben Hecht and Charles MacArthur, made history. Its poetic quality, in lines created to be spoken, not read, was completely realized. The dark, brooding, virile Heathcliff came alive in the person of Laurence Olivier. Merle Oberon and David Niven turned in unforgettable performances.

Modern classics reached the screen, too. *The Good Earth*, adapted by MGM from Pearl Buck's moving story of Chinese life, took three years to produce. Property men were dispatched to China where they spent months buying up authentic furniture and objects. The painstaking effort was rewarding to audiences for whom the novel took on new meaning.

A current best-seller which had tremendous picture possibilities was filmed by Warners in 1935. *Anthony Adverse* had smashed sales records across the country, made the reputation of Hervey Allen over night and started a new vogue for massive, historical novels. Its picturization was widely anticipated and enthusiastically received by film audiences.

Four years later, a similar situation was enacted over the filming of *Gone With The Wind*. Public interest was high because of the book's phenomenal sale. Given lavish, expensive production, it satisfied the most exacting standards set by book-lovers.

Countless other classics and best-sellers have been given new life and vigor on the screen since sound was introduced: *Tom Sawyer*, *Lost Horizon*, *Of Mice and Men*, *Pride and Prejudice*, *Camille*, *How Green Was My Valley*, *Arrowsmith*, *A Farewell To Arms*, *Dodsworth*, *Private Worlds*. This movement was not a passing fad. The interest in book adaptation grew stronger each year. Now new books are selected for screen adaptation even before publication.

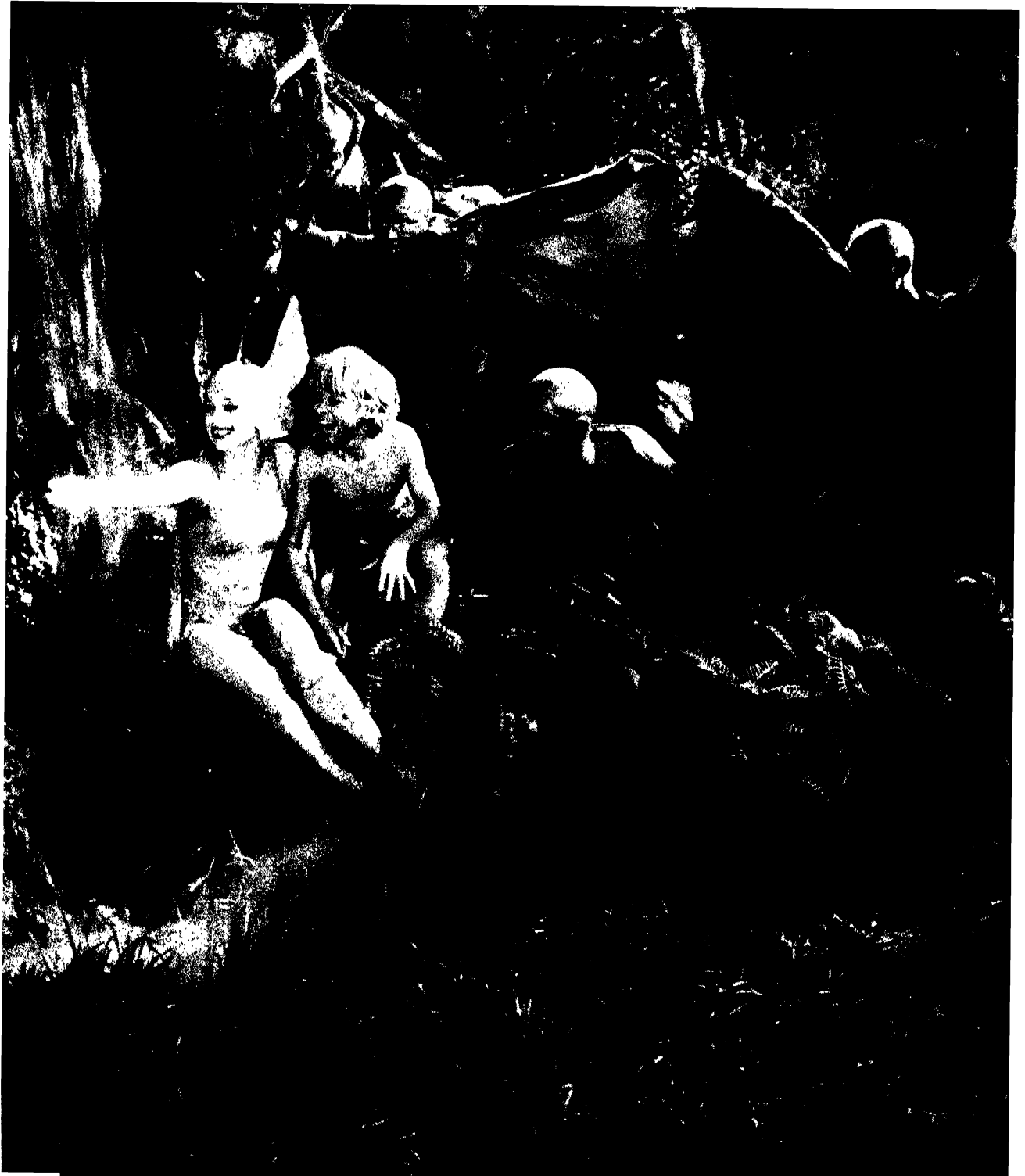
Sound created a greater demand for good screen writing and made possible screen adaptations inappropriate to the silent film. Presenting these works at low prices in neighborhood theaters did much to kindle an interest in the classics—and books in general—among film-goers. In so doing, the film industry played a direct part in improving American literary taste and raising public entertainment standards.



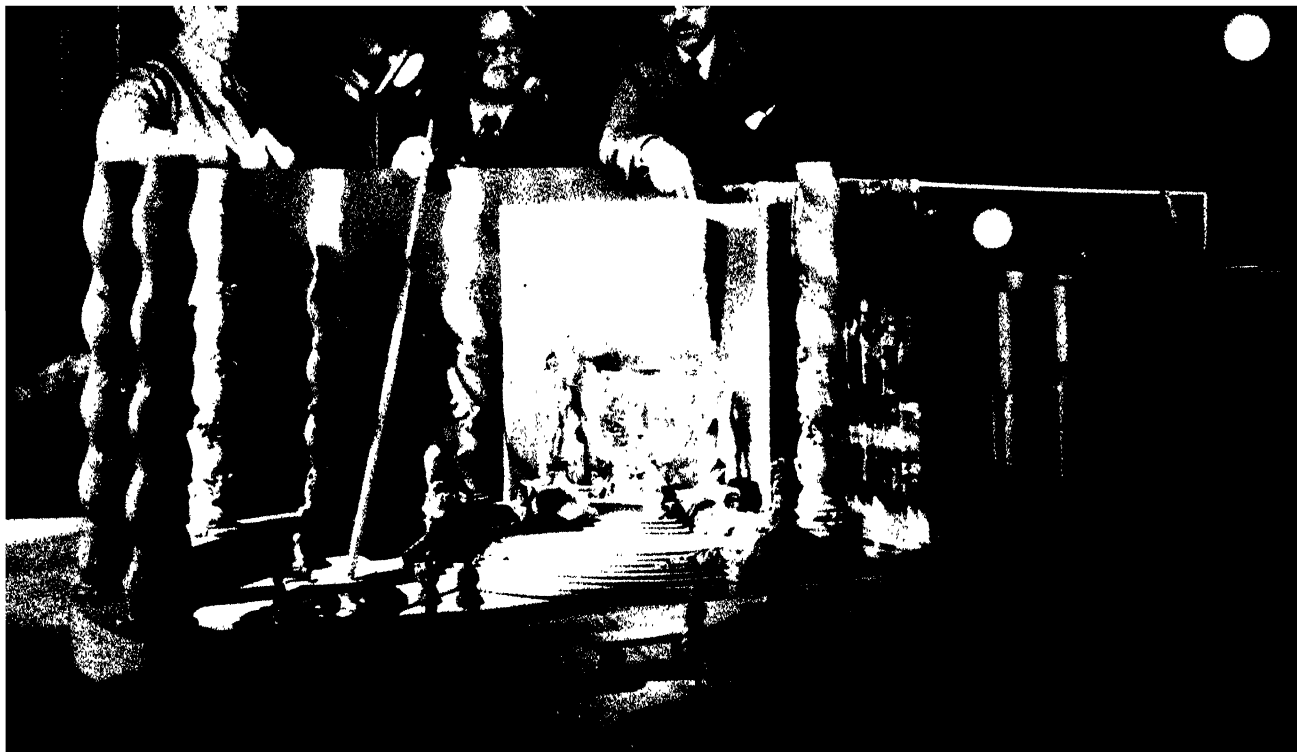
A Midsummer Night's Dream was shot through stippled screen for shimmering effect and the youngsters used as fairies for the forest ballet were tutored by Nijinska.



"Sleep thou, and I will wind thee in my arms. O! how I love thee; how I dote on thee!" (At right) Lysander, Hermia (Dick Powell, Olivia de Havilland) rehearse mirrored lake scene.



Egeus has given Demetrius (Ross Alexander) permission to marry his daughter, Hermia. She loves Lysander, refuses Demetrius. Helena (Jean Muir) loves Demetrius and tries to win him over by telling him of the estranged couple's plan to elope. The four are separated and fall asleep in the foggy forest. Puck (Mickey Rooney), the mischievous elf shown above with Queen Titania's attendant (Nina Theilade), pours "love-juice" on Demetrius' and Lysander's eyes.



Max Reinhardt (center), producer, studies scale model of the courtroom set used in *A Midsummer Night's Dream*. And . . .



. . . here, in this informal shot of the cast, is the actual massive courtroom set. Nothing was spared to make this elaborately adorned scene as complete as Shakespeare would have liked it.



Puck watches potion's effect. The juice, poured on a sleeping person's eyelids, makes him love the first creature he sees. Puck roars with laughter, "Lord, what fools these mortals be!"



The first person Demetrius and Lysander see when they awake is Helena; both make love to her. Helena disbelieves the fervent amorousness shown by them, accuses Hermia of conspiring with them to mock her. Oberon, King of the fairies, ponders Puck's mistake.



Above, Ross Alexander, Jean Muir, Olivia de Havilland and Dick Powell in the scene where each professes his love. *A Midsummer Night's Dream* employed all of the artifice of Hollywood. The donkey's head, worn by James Cagney, could eat, weep, smile, talk and roll its eyes. Another marvel was the unicorn used in the forest scenes. It was "manufactured" to look like the encyclopedia definition—a creature with the head and body of a horse, the tail of a lion, the beard of a goat, with a long, sharp, twisted horn protruding from its forehead.



A Veronese palace and garden were reproduced exactly for MGM's screening of *Romeo and Juliet*.



Believing Juliet to be dead as she sleeps in the tomb, Romeo drinks a fatal potion. Awakening, Juliet falls upon his dagger. And so the lovers keep their earlier vows of constancy.



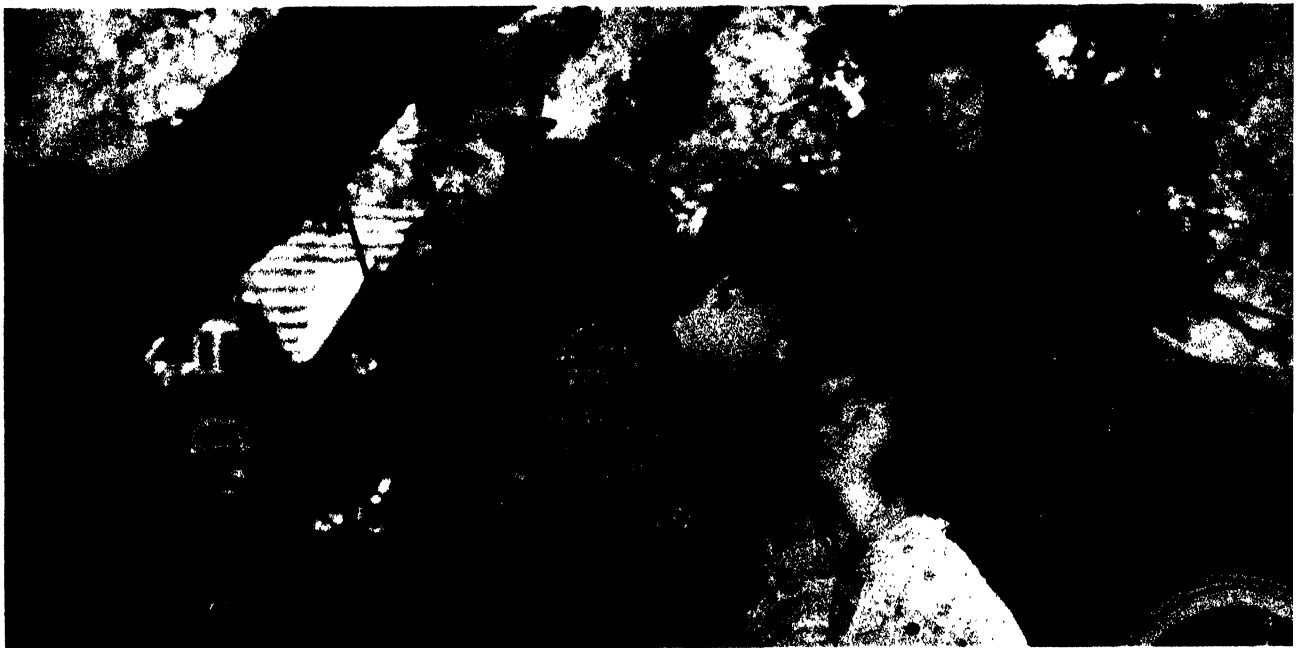
"Good night, good night! Parting is such sweet sorrow
That I shall say good night till it be morrow."



⌈ Storming the Bastille in *A Tale of Two Cities* required countless studio technicians, make-up men, designers, wardrobe men and engineers. The almost religious precision with which MGM carried out the detail in Dickens' novel was characteristic of filming of classics. Not only the spirit, but the letter of these great books was captured by film artists, producers, mechanics, writers and hordes of extras trained and costumed for bit parts.



William Thackeray's novel of manners, *Vanity Fair*, was filmed as *Becky Sharp*, with Miriam Hopkins (center) in the title role. Only the name was changed in the screen adaptation.



David Copperfield, another Dickens' story, introduced Freddie Bartholomew (center) in a memorable performance. Even more memorable was W. C. Fields as the eternal optimist, Mr. Micawber.



Victor Hugo's novel *Les Misérables* came to the screen in 1935, with Fredric March as its star.



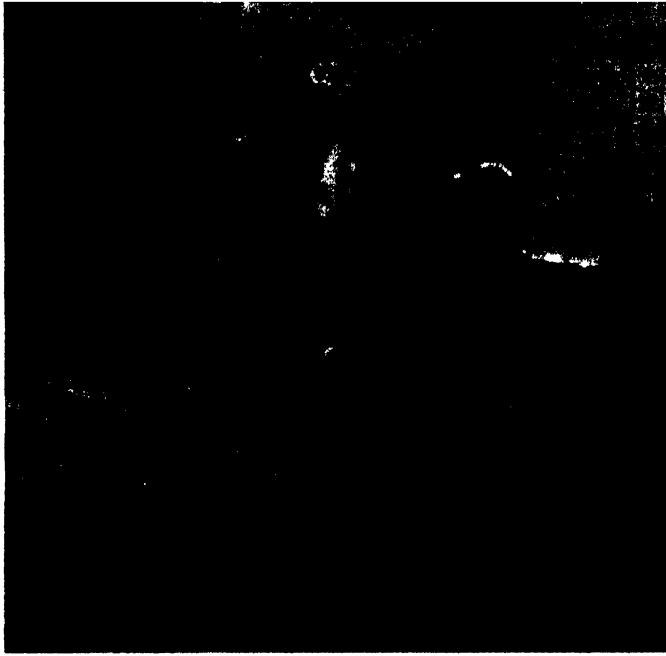
Jo (Katherine Hepburn) meets Laurie (Douglass Montgomery) in the film version of *Little Women*. Louisa May Alcott's classic story of Jo, Meg, Beth and Amy broke box office records.



Dumas' immortal love story, *Camille*, was filmed in 1936, with Greta Garbo and Robert Taylor. MGM's production was a tremendous improvement over the 1921 version with Alla Nazimova. Ornate sets, expert direction by George Cukor, passionate acting and the all-important, new element—sound—made the difference. Camille's dying gasps could be heard, there was less mugging and more acting—thanks to the spoken word. The musical score underlined the tragic mood of the film and gave the highly romantic story even more emotional impact.



Laurence Olivier as Heathcliff and Merle Oberon as Cathy hide in their "castle rock" high up on the moors. Where once they pledged undying love, Cathy tells him she wants "dancing and singing in a pretty world" and not the gypsy life he offers her. Emily Bronte's passionate story, *Wuthering Heights*, gained new power and beauty in its brilliant screen adaptation.



A servant follows Cathy who has run after Heathcliff to persuade him to stay at Wuthering Heights.



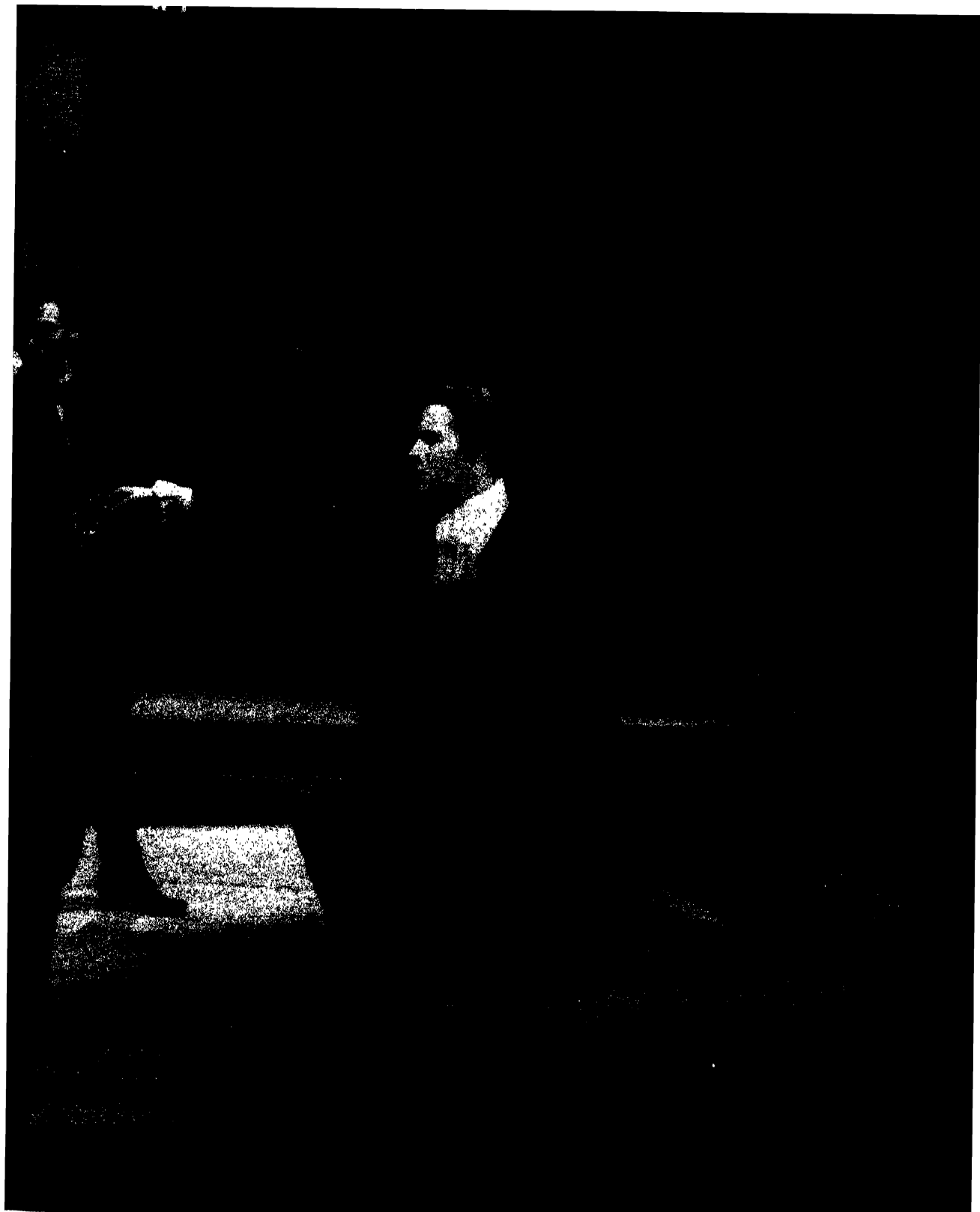
Reunited after years of separation, the lovers swear their eternal devotion.



Heathcliff carries Cathy to see the heather-scented moors for the last time. As she dies in his arms he murmurs: "What do they know of Heaven or Hell, Cathy, who know nothing of life?"



Dennis Moore, played by Louis Hayward (right), is killed in a duel with the husband of his beloved Maria. Their bastard son, Anthony, is the hero in this film version of *Anthony Adverse*.



Warners bought the massive historical story and condensed it into film form. In so doing, they lost none of the color and action which had distinguished Hervey Allen's best seller.



"Tara," "Scarlett" and "Rhett" were brought out of best-seller lists onto the screen in 1939.



David Selznick's *Gone With The Wind* was a lavish version of Margaret Mitchell's novel. Vivien Leigh (left) played the volatile Scarlett, and Clark Gable, the public's choice, was Rhett.

Eye, Ear and Brain

LITTLE did the inventors of the *Magia Catoptrica*, zoetrope or praxinoscope suspect that some day a medical artist would make sketches from the stills of a motion picture taken during an operation (left).

Today, sound pictures not only teach medical students the techniques of surgery, they also tell salesmen how to sell, show mothers how to rear babies, farmers how to till fields and mechanics how to repair machinery. The revolution which sound pictures brought to the film theater is now spreading to other fields. The voice of the screen is reaching far beyond our 20,000 theaters—to more than 250,000 churches, 30,000 men's and women's clubs and more than 1,200 YMCA's all over America.

Hollywood proved that sound pictures could bring the living, *speaking* drama to a new mass audience. Industrialists, labor leaders, scientists, educators and governments have not been slow to heed the lesson.

Each of these groups is now using sound films. Generally speaking, their productions are designed to (1) entertain, (2) sell, (3) instruct. In many cases, all three of these objectives can be—and often are—pursued simultaneously. In the "institutional" type of industry film, it is often difficult to tell where the entertainment leaves off and the sales talk begins—so sugar-coated is the advertising message. This is not true, of course, in the purely commercial or sales promotion type of film.

The magazine *Business Screen* lists 50 or more companies producing commercial films. Today, most of the large corporations have commissioned the making of at least one film to sell their goods, promote their services, train their employees or incline the public favorably to their policies.

Last year commercial film producers grossed \$57,000,000 worth of business. One of the biggest of them—the Jam Handy Organization—has made 27 films, scheduled 175,603 screenings and secured a total of 162,278,000 attendance for *one* client in the last three and a half years.

Since these films do not compete with the Hollywood product at the neighborhood box office, they need not be made with expensive casts, elaborate sets, costly music and sound effects. Yet, because they must *interest* before they can sell, they *do* present a professional product: a generally good script, effective and convincing—if not elaborate—staging, and they frequently

attain considerable dramatic power. Surprisingly enough, they are often completely free from offensive advertising, and in many cases, they have promoted public health, safety, training and education.

Diesel—the Modern Power (General Motors) illustrates the principles of diesel engine operation. *Love, Honor and Obey the Law* (B. F. Goodrich Company) teaches the importance of safe driving. *Sex Hormones* (Parke Davis & Co.) is a technical picture for physicians. Literally hundreds of such subjects—one form of “education”—roll out of the commercial studios each year.

Big as the business in commercial films is, however, it is dwarfed by the potential for purely educational pictures, a potential only beginning to be realized. Lacking the subsidy which industry could put behind commercial productions, the educational film has struggled fitfully for years. With a slowness exasperating to its most enthusiastic supporters, the educational film plodded along, held back because the schools could not afford to buy projectors. In 1940, there were only 14,837 sound projectors in the nation's schools and colleges. Not long before that, the average 16 mm. sound projector cost about \$700 and weighed 200 pounds. Today sound projectors sell for as low as \$200 and weigh less than 75 pounds. It is estimated that there are now 26,000 sound projectors in use by all the schools, churches, industries, and other organizations in the U. S.

An indication of the progress of educational films may be had by surveying the catalogue distributed by the New York University Film Library. The list includes productions in every conceivable category: economics, child care, animal life, geography, foreign languages, health and nutrition, home economics, industrial problems, labor-management, medicine, music appreciation, psychology, race and minority problems, safety education, natural and physical sciences, sports and physical education. More than 1,700 clients are using this service and the 650 titles are in constant demand.

Sound has played a major role in the development of educational films, as proved in a survey of students by the Committee on Motion Pictures of the American Council of Education. The committee's report disclosed that sound films received more “excellent” ratings and fewer “poor” ratings than did silent films. Sound films maintained the feeling of “personal” contact with a teacher which had been lost in silent film education.

Today almost 50 companies are producing or distributing educational films. By far the biggest producing company is Encyclopedia Britannica Films, Inc., which has for rent or sale 500 educational subjects of every conceivable kind: *Electrostatics*, *Theory of Flight*, *The Weather*, *Care of the Feet*, *Snapping Turtle*, *Shep—The Farm Dog*, *Navajo Indians*, *Distributing America's Goods*, *Property Taxation*, *Principles of Home Canning*, *Baby's Day at Twelve Weeks*, *Thermodynamics*, *Vacuum Tube in Radio* and 487 more!

Most of Encyclopedia Britannica's films are designed for classes from the primary grades through high school. Its pictures are marketed in 11 countries; 124 features are available with Spanish sound tracks, 110 with Portuguese and 97 with South African. With each of its films is sent a Teacher's Handbook which contains a complete summary of the film in continuity plus

suggestions as to how the film can be presented most effectively with classroom work. This book also contains reading references.

Biggest distributor in the educational field is the YMCA Motion Picture Bureau. Organized in 1911, the Bureau began primarily as a service to local YMCA's. Today, however, it serves more than 25,900 outlets—including schools, colleges, churches, industries and clubs. In addition to educational films, the Bureau also distributes industrial films of an educational nature, religious films, government productions and 16 mm. versions of Hollywood features. The latter are selected with the co-operation of Teaching Film Custodians, a project of the Motion Picture Producers and Distributors of America (Johnston Office).

The YMCA also has created a producing unit called Association Films, whose first films were instructional two-reel shorts titled *Play Volleyball* and *Play Softball*.

That Hollywood has long been awake to the potentials of the screen in education is indicated by Warners' consistent production of its well-known American History series, the full import of which is considered in Chapter Ten.

Latest Hollywood development, in relation to the teaching role of films, is the plan of Loew's International Corporation to use its world-wide distribution facilities for educational films, shorts, "documentaries" and films made by the U. S. Government and foreign producers. Under this plan, almost all films from all lands that have any bearing on education will be available on a "budget service basis" in which the company will finance, on a long lease arrangement, the entry of a school, college, trade union or other organization into the educational field. Rental charge will be on a per capita basis, adjusted to the number of people in the group. The plan is intended to overcome the handicap most schools and organizations face in meeting the large initial cost for films, projectors and other equipment—a factor which helped to hold back the spread of audio-visual education in the past.

Loew's decision to go into the 16 mm. distribution field on a world scale could hardly be said to have been prompted by the threat of a group of Denver, Colo., high school students who started to produce their own educational films. Yet that is exactly what the Denver boys and girls did—produce *sound* movies under the direction of teachers who say today: "They have proved invaluable as a means of interpreting the school curriculum to parents." More than that, the students learned not only how to gather information, develop scenarios, write scripts, arrange for locations and edit the film—they learned the basic facts of their community. People interested in community finance, housing and health went out of their way to present controversial facts to the students. The local bankers, impressed by the work of one group, invited an economics class to make a movie on the subject.

The Denver program, carried on in 1941 with the co-operation of the American Council on Education, has since been duplicated in other schools. Who knows but what some of tomorrow's great Hollywood directors may be under grooming now on the "set" at some high school backlot?

Hollywood itself, of course, isn't exactly new to this business of educational films. During the war, its technicians, by the scores, worked on Army and Navy training films. In fact,

it was the Army and Navy training film that opened the eyes of America's educators to what *could* be done to improve teaching by means of sound films.

General George Marshall, former Chief of Staff, said that World War II saw the development of two new weapons: the airplane and the motion picture. He meant, of course, the *sound* motion picture, for without sound, there is doubt that the film training program could have been even half so effective. The Army and Navy made literally thousands of training films. From the day of his induction until he received his final discharge papers, the serviceman was literally shepherded through his training and military life by motion pictures.

Orientation films taught rookies how to fire guns, helped shape them into finished fighting men, showed them how to handle their arms under battle conditions, how to save lives, how to operate tanks, flame throwers and other complicated weapons. Soldiers learned how to meet the enemy in desperate hand-to-hand struggle, how to find their target in the bombsight, how to operate radio sets, how to dive off sinking ships, reach the shore and stay alive in the jungle. Many a man owed his life, literally, to what he had seen and heard on and from the silver screen. It wasn't that Hollywood made all or even most of these films. The vital fact was that the *techniques* for making them had been perfected over the years by the motion picture industry.

Feature films also played an important war-time role. They were as persuasive as training films. The influence of feature films on public thought had been clearly demonstrated. It had even been shown by the careful statistical research of W. W. Charters, Director of the Bureau of Educational Research at Ohio State University, and his associates. Ten years before World War II broke out, Professor Charters, in a four-year series of investigations had shown that (1) many trends in speech, clothing and house furnishings were directly attributable to motion pictures, (2) pictures contribute a considerable amount to our scientific information, and (3) many pictures produced for entertainment purposes could legitimately be transported into the schoolroom and used as teaching devices.

Between Munich and Pearl Harbor, the people of America watched with a dread fascination as the clouds of war spread over Europe and Asia—hoping against hope that they could "sit this one out." A peace-loving public was violently opposed to war, as was Hollywood. But the motion picture industry, realizing the approaching menace of Hitlerism, used feature films to awaken America to its danger.

The Warners broke the ice when the danger became unmistakable in 1939. They released an uncompromising indictment of the Fascist spy ring operating in the United States—*Confessions of a Nazi Spy*. In 1940, MGM produced *Escape* and *The Mortal Storm*, both anti-Fascist films. After Pearl Harbor, those far-sighted thinkers who had called the shots earlier were hailed as prophets. The film's role changed from one of prediction to one of training and morale boosting.

Feature films such as Paramount's *Wake Island*, United Artists' *In Which We Serve*, Warners' *This Is The Army* and *Sergeant York*, Twentieth Century-Fox's *Guadalcanal Diary* and countless other tributes to men who fought in World War II did much to tighten existing unity

between Americans and the Allies. Documentaries were avidly received by moviegoers, and these action short shots on Pacific beaches or on Atlantic convoys by Army and Navy cameramen carried the message of total war even closer home.

To civilians working in war plants or holding down their old jobs, information films became a steady diet. *The Case of the Tremendous Trifle*, made by the OWI, emphasized the wartime role of the smallest piece of material. It was distributed among war plants to give workers an overall picture of vital industrial warfare. *Eating At Work* was another film with a factory market. It discussed nutrition problems in factory canteens. Safety and first aid films were widely distributed.

Sound films did more than teach American soldiers how to fight. They reminded all Americans of what they were fighting for. Frank Capra's series done for the OWI traced in graphic fashion the inception and progress of aggression. *Prelude to War*, *The Nazis Strike*, *Divide And Conquer*, *Battle of Britain*, *Battle of Russia*, left no GI or civilian in doubt as to why he was fighting a total war.

The film industry takes its educational job seriously because it knows it has an important contribution to make to world enlightenment. In an atomic age, time is of the essence and learning of utmost importance. Audio-visual films may help solve the problem of rapid mass education. In the words of Pope Pius XII, "Oh, the immense amount of good that the motion picture can effect!"



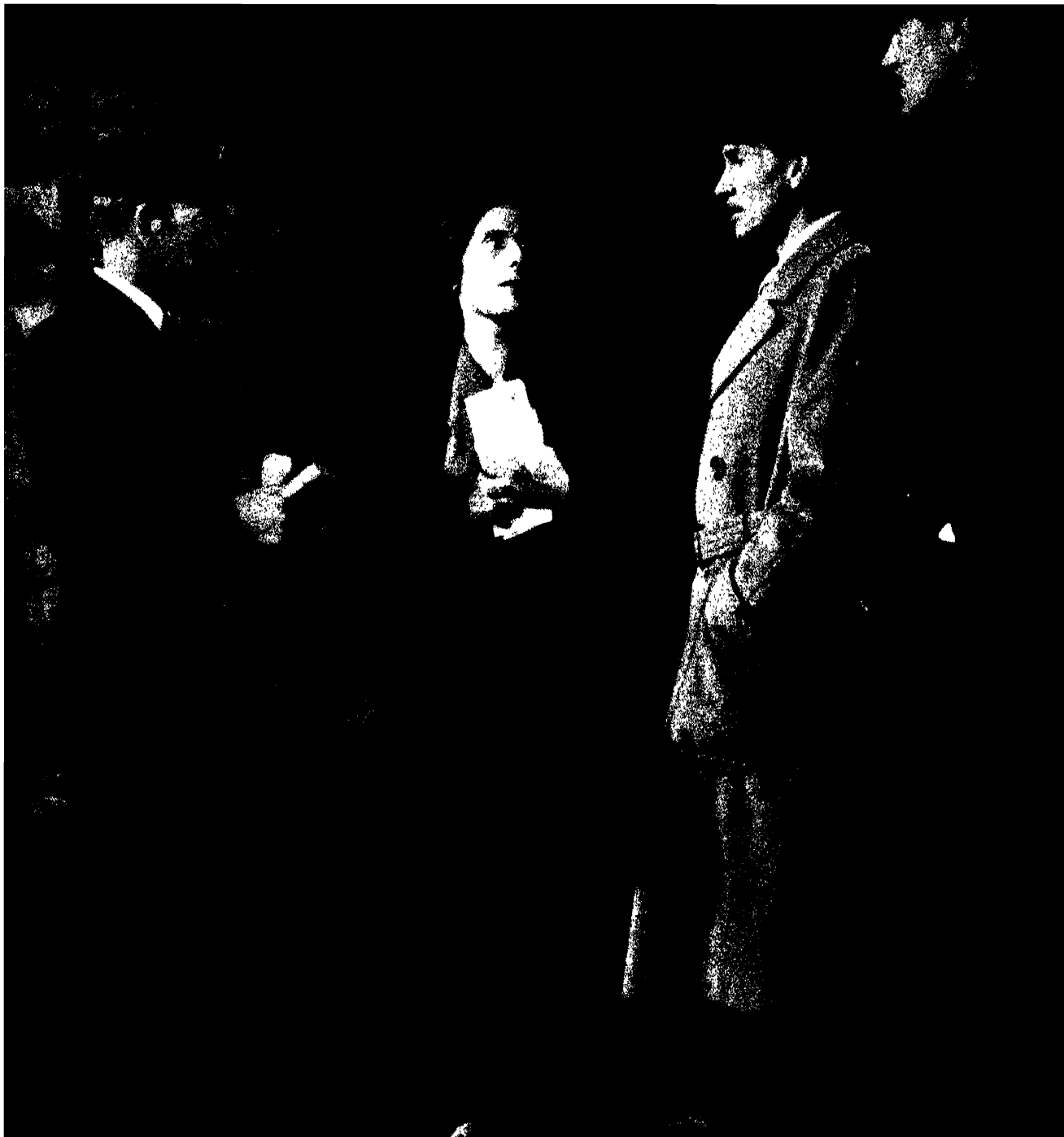
By 1936, the shape of World War II could be seen in Franco (above) Spain. This minor dictator welcomed 220,000 Fascists from Germany and Italy who used Spain as a testing ground for war.



Hitler's careful preparation and the appeasement policy of other governments paved the way for Poland's invasion. On September 1, 1939, Germany attacked, and the war was officially on.



Hollywood was a warning voice even before the start of World War II. *Blockade*, co-starring Henry Fonda and Madeleine Carroll (above), showed the violence of the Spanish War. Made in 1938 by Walter Wanger, the film was an indictment of Fascism and appealed to "the conscience of the world." One year later, all Europe was embroiled in the fight for survival.



1. In America, we thought we could remain completely isolated from a global war. A film released by Warners in 1939 shook that conviction. Based on a true espionage case, *Confession of a Nazi Spy* begins in a small Scottish town early in 1937. A postman, seeing all the foreign stamps on Mrs. MacLaughlin's mail, becomes suspicious of her activities and informs Scotland Yard. Scotland Yard investigates, finds she is an agent for Dr. Kassel, German-American Bund leader in New York. After a thorough investigation, Scotland Yard clamps down and arrests Mrs. MacLaughlin. This is the first of a series of arrests. Meanwhile, in the United States, Dr. Kassel and his associates are holding their Bund meetings. In true Nazi style . . .



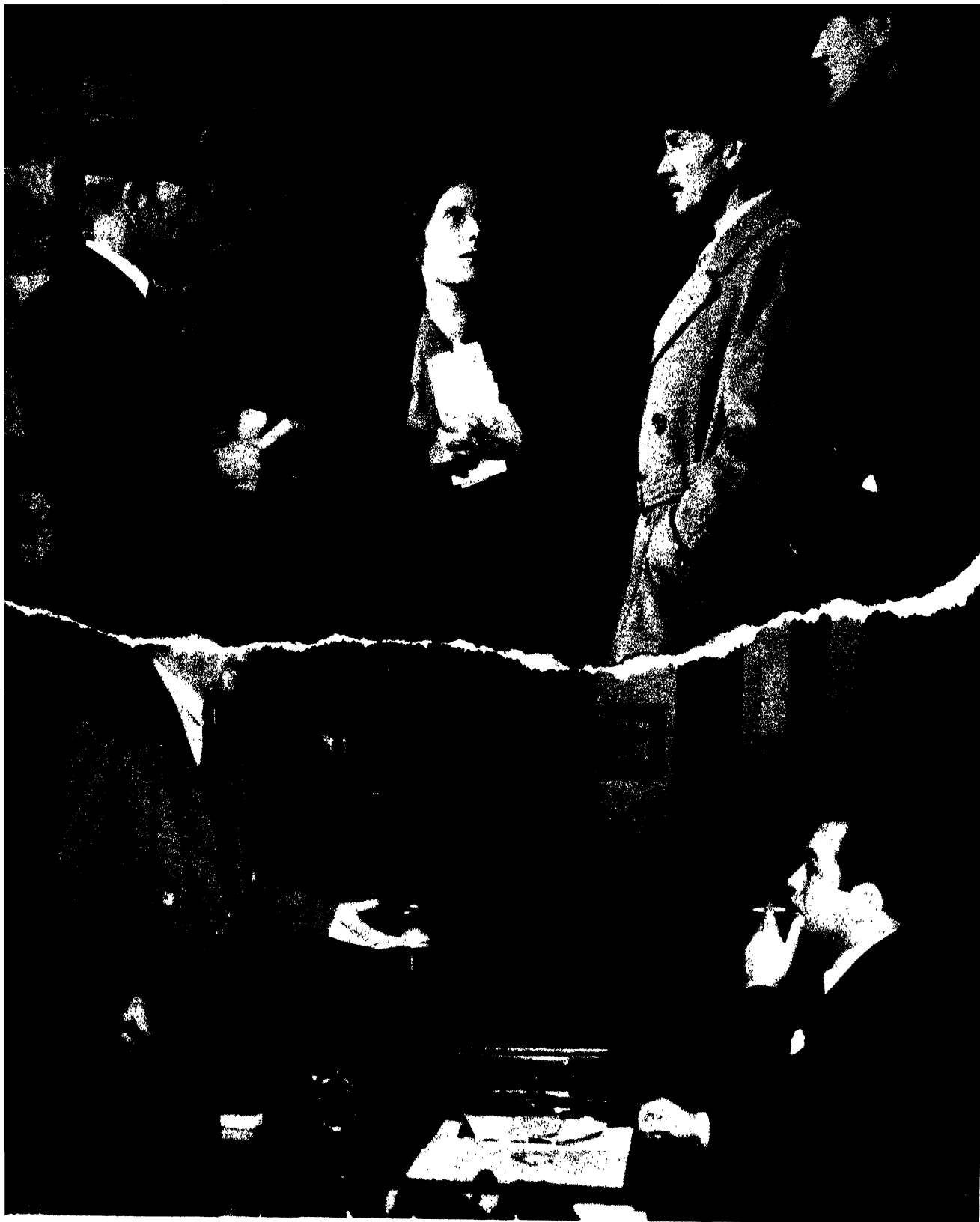
the
meet



3. ... Franz Schlager (George Sanders, right), Nazi political leader who has come to America to check on the Aryan purity of Kurt Schneider (Francis Lederer), espionage agent.



4. To prove he is a good Nazi, Schneider promises to get the Army Z code and the records giving the number of troops stationed in the New York area. The FBI trails him.



6. At headquarters, Schneider denies he's a German spy, tells FBI man Renard (Edward G. Robinson) that he knows nothing of the Army Z code which was found in his apartment . . . Finally . . .



7. . . . he breaks down, confesses his part in the espionage plots. He tells Renard the names of some of the other Nazi agents in America. They arrest Schlager's fiancée, Hilda Kleinauer.



8. Hilda tells G-Men of Dr. Kassel; he denies knowing her. She comes into the room and identifies him. Finally, he admits his role, gives them the names of all Nazi agents in America



9. The Nazis learn of their betrayal, send two Gestapo men to get Dr. Kassel. . . .



10. They beat him up, smuggle him out of the country. The FBI, having checked list of agents . . .



11. . . . start to make their roundup. They arrest a draftsman, soldier, munitions worker, etc. But the Gestapo has not been sleeping. Taking advantage of American legal loopholes, they . . .



12. . . . bail out some defendants, smuggle them out of the country. When the G-Men try to get them back to stand trial, the beaten, fearful defendants refuse to go, *want* to go to Germany.



13. The FBI, at the same time, has not lost custody of its four main defendants. They are brought to trial and convicted of being spies in the pay of the German government. *Confessions of a Nazi Spy* was one of the first of a series of exposes and war films to be shown to the American public. Reaching millions of moviegoers, it was education in the broadest sense. The screen attempted to present factual material in a dramatic form and so illuminate the world crisis. They presented only the truth, which needed no elaboration.



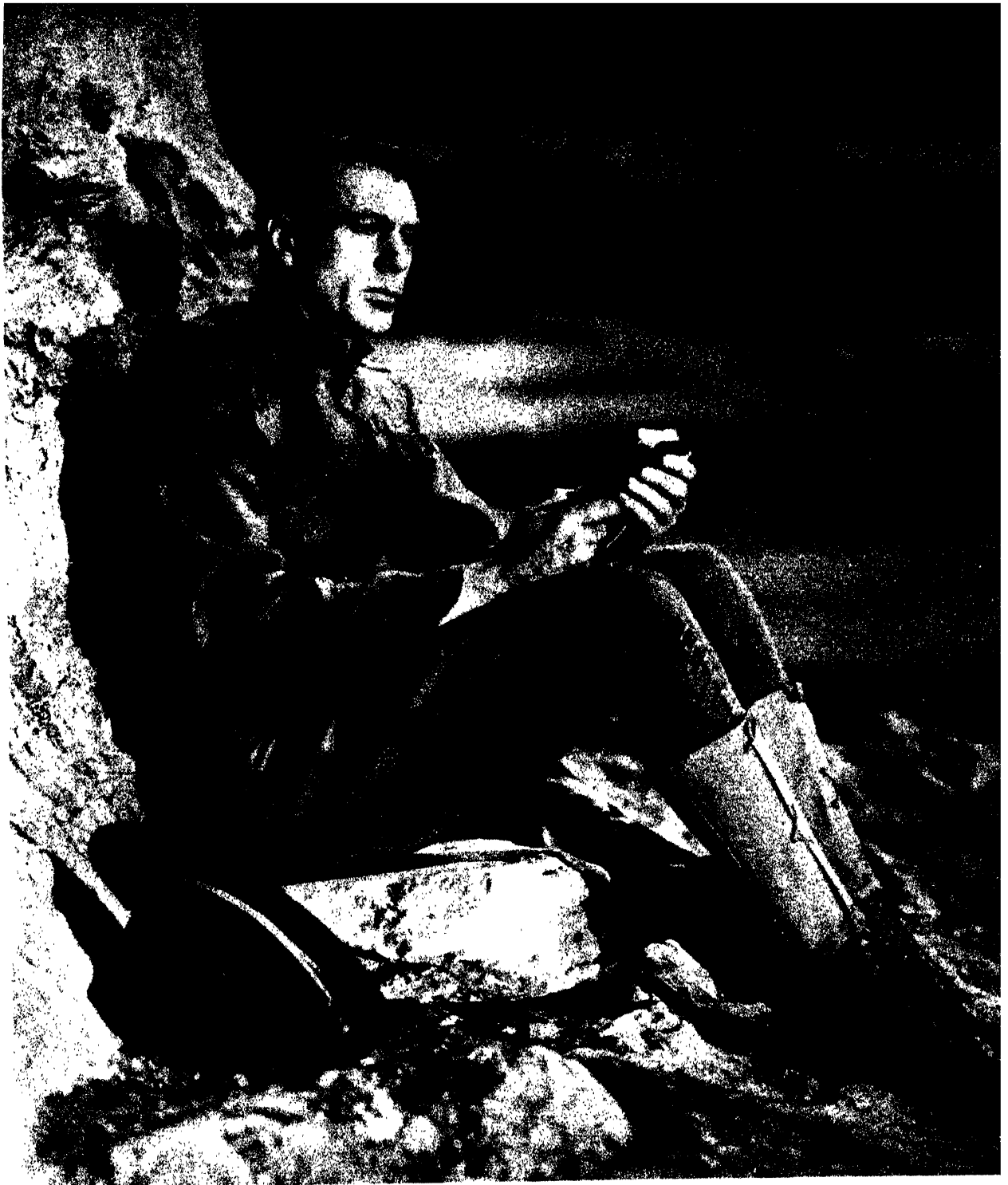
Testifying before a Senate Committee which had accused the movie industry of war-mongering, H. M. Warner traced the history of *Confessions of A Nazi Spy*. "In June, 1938, certain persons were indicted in a New York Federal Court, charged with being Nazi spies and with violation of U. S. espionage laws. The spy ring was revealed by the Federal Bureau of Investigation, and the charges attracted great attention in newspapers throughout the country. Before the trial began, the *New York Post* announced that it would publish a series of daily articles on the spy ring, authored by Leon G. Turrou, a former FBI agent, who was active in developing the case . . . Mr. Turrou's material was impressive and we purchased the motion picture rights . . . The final script was rechecked for accuracy and the resulting effort was a carefully prepared picture, portraying—on the basis of factual happenings—Nazi espionage within this country, the semi-military German-American Bund camps within the United States and the tie-in of these bunds with Nazi Germany. We gave the public a dramatization of a Nazi spy ring. But I repeat, the dramatization was not the creation of our imaginations."



As war neared, the draft law was enacted and thousands of American boys marched off to camp.



By December 7, 1941, America was partially geared for war with machinery and trained men.



But the average soldier's heart wasn't in the fight despite his rage against the Axis. Reared in a peace-loving country, he hated war. Warners' *Sergeant York*, based on the life of World War I's most beloved hero, handled this problem with sensitivity and understanding. Gary Cooper, as Alvin York, decides to fight for his convictions even if it means killing other men. Films like this one did much to educate Americans in Allied objectives during World War II.



MGM's *Mrs. Miniver* brought the Battle of Britain home to American moviegoers.



And *The Moon Is Down* showed Americans how Nazis ruled in occupied Norway.



This Is the Army built home front morale with its flashback to World War I, its Irving Berlin score and its informal treatment of life in the training camps. Warners' non-profit production earned more than seven million dollars for the Army Relief Fund.



Air Force, the moving story of a bomber and its crew, did much to show Americans what an airborne war entailed. The complex training of pilot, navigator and bombardier; their mission to bomb Japanese-held islands; and their heroism, made top-flight screen entertainment.



Air Force showed deadly combat on the ground as well as in the air.



Action in the North Atlantic, made by Warners, pictured the heroism of merchant seamen who braved submarine warfare to get vital supplies across the sea.



Films covered the Pacific war with features like *Wake Island*, *Guadalcanal Diary*, *Destination Tokyo*. One of the fine documentary films was *The Fighting Lady* (above), story of an Essex Class aircraft carrier. Robert Taylor narrated the story. The carrier's action on Kwajelein, Truk, Marcus Island and the Marianas was photographed by cameramen under the supervision of Captain Edward J. Steichen. Hellcat fighters, Avenger torpedo-bombers and Helldivers carried cameras in their wings so that Americans could see the war through the eyes of their fighting men.



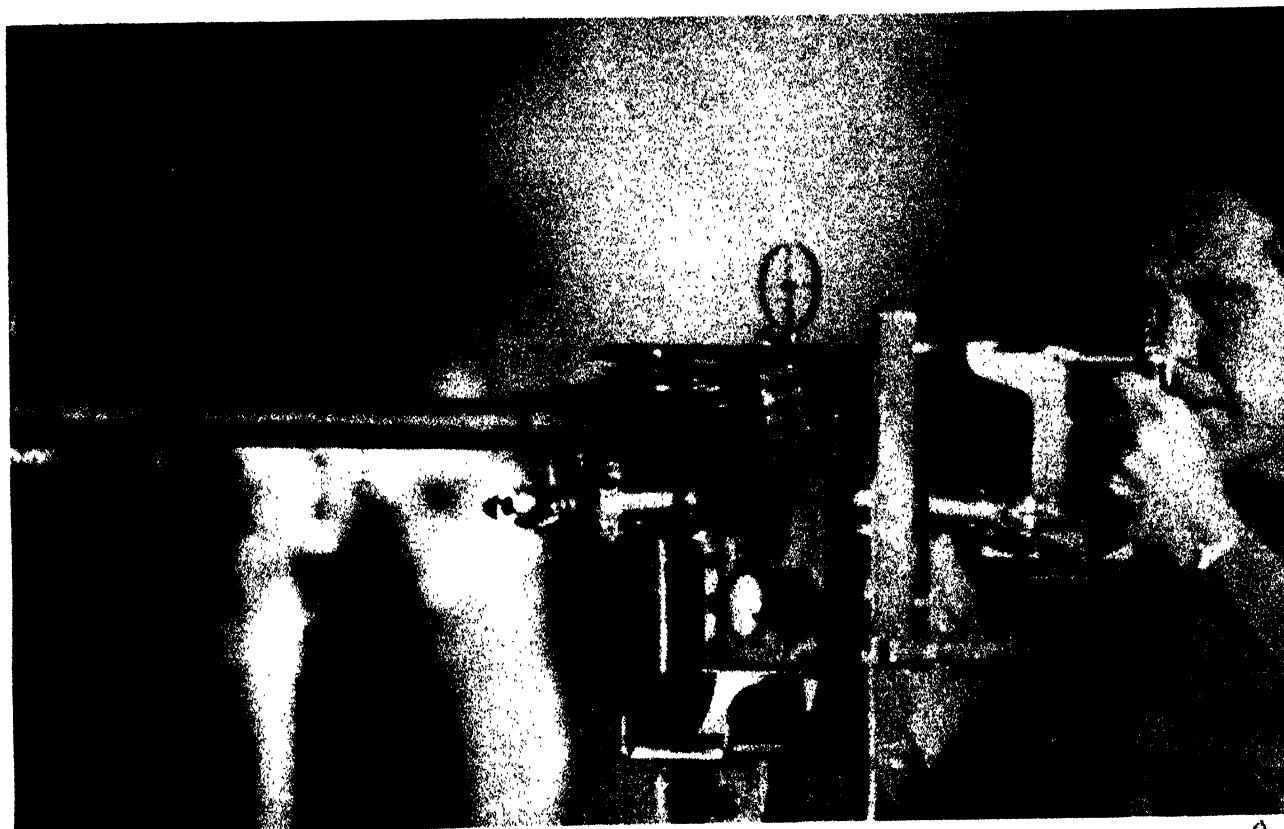
Soldiers as well as civilians were educated by film. They were taught The Articles of W



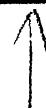
how to bail out of a blazing plane, survive on the open sea in a lifeboat indefinit



... carry pounds of essential equipment effortlessly while skiing at breakneck speed ...

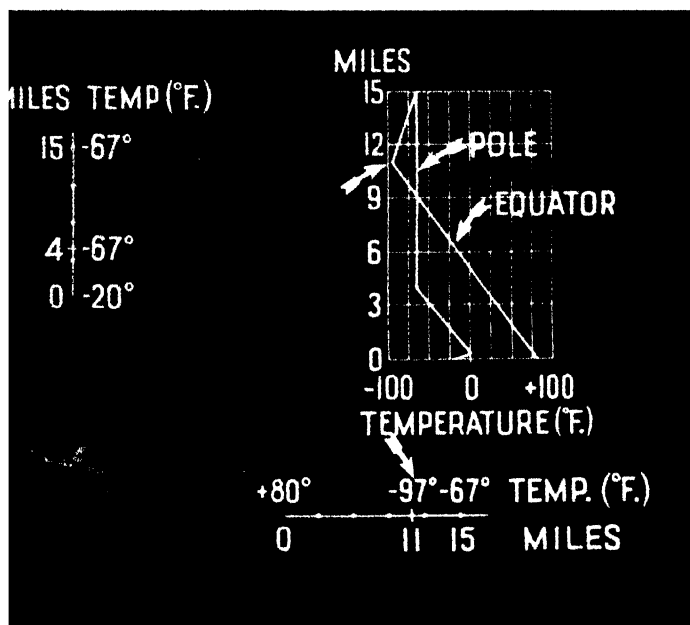


... how to shoot and kill, through training films made by Hollywood's top-flight talent.





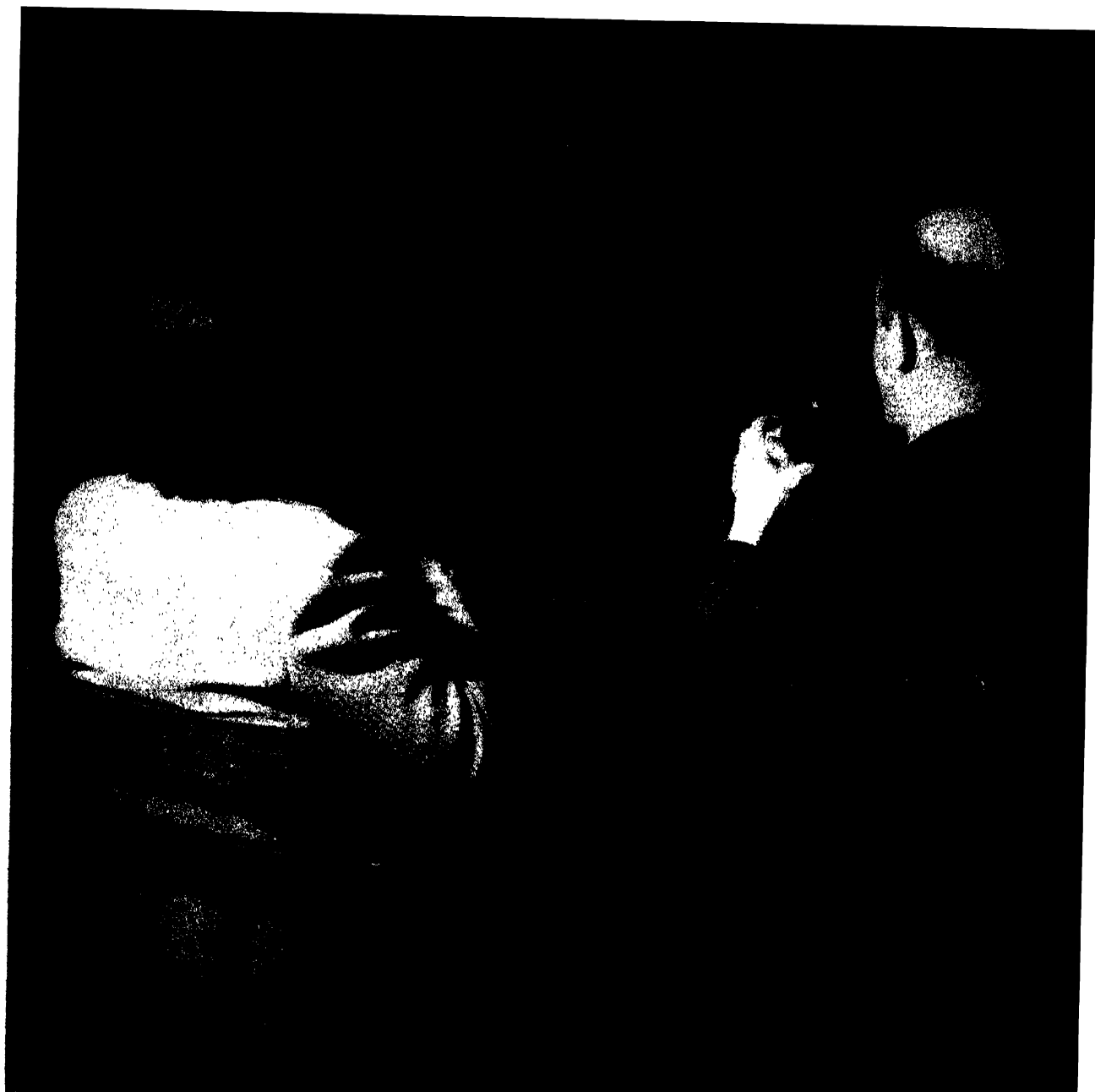
Sound films are as valuable in peace as they are in war. Teen-age youngsters can operate this Filmosound projector, and speed learning. Many schools have them. Many more should.



Encyclopedia Britannica Films' *Work of the Atmosphere* shows the chemical and mechanical actions of the atmosphere on the earth.



Natural sounds of hatching fowl are reproduced in Britannica's *Poultry on the Farm*. Accuracy is assured by expert editors in all fields.



Experimentation in the field of sound and sight never ceases. "Visible speech," which utilizes sound vibrations (visually reproduced), may prove revolutionary in teaching the deaf to speak. The speech of a totally deaf person is very difficult to understand because he has not been able to judge his efforts by his own or anyone else's voice. The sounds he produces vary widely from normal speech. But when sound is translated into a visual medium, his deafness no longer hinders him. He can see and memorize a new "vocabulary" of sound vibrations which look something like shorthand symbols. Using the audio-visual "translator" (above), he speaks into a microphone which translates his sounds into visual patterns. Comparing his own with the speech patterns of an instructor, who speaks into a second microphone, he is able to correct articulation. Miss Harriet Green of Bell Telephone Laboratories here instructs Edgar Bloom, an engineer who has been deaf since birth.



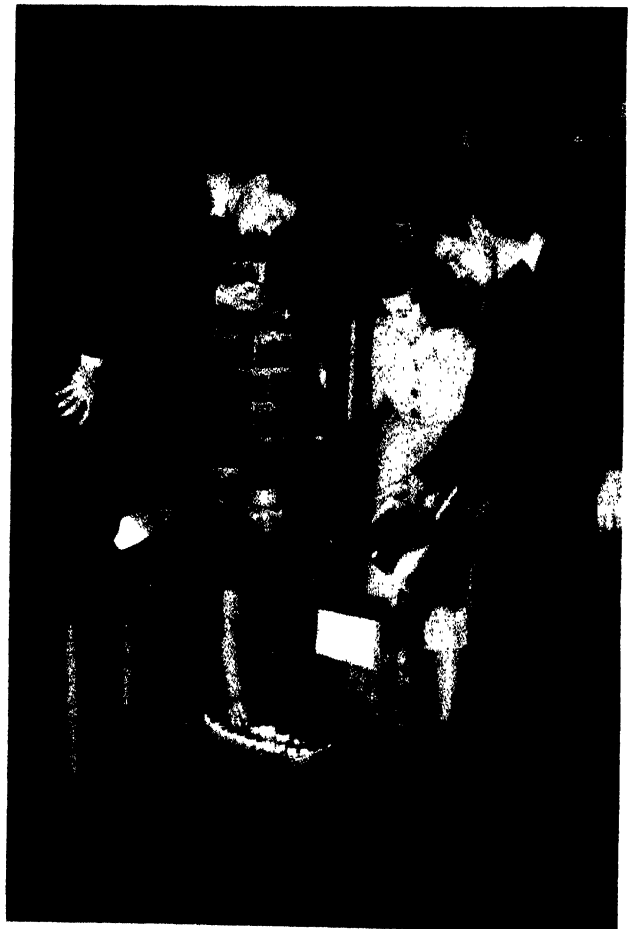
Making (as well as seeing and hearing) films can be highly educational. These Denver students first did research . . .



. . . then produced sound pictures on the industry, agriculture and commerce in their community. They wrote stories, scripts, did photography . . .



. . . and edited and cut the film. Such experience taught students the principles of objectivity and good reporting.



Writing and lettering of titles trained students in a practical application of the knowledge learned in high school literature and art classes.



Perhaps the most enriching values of the Denver school program were the experiences of student producers in going out on location to make pictures. This taught them to observe the good and bad points of their own community—and how to present them to others in sound films.



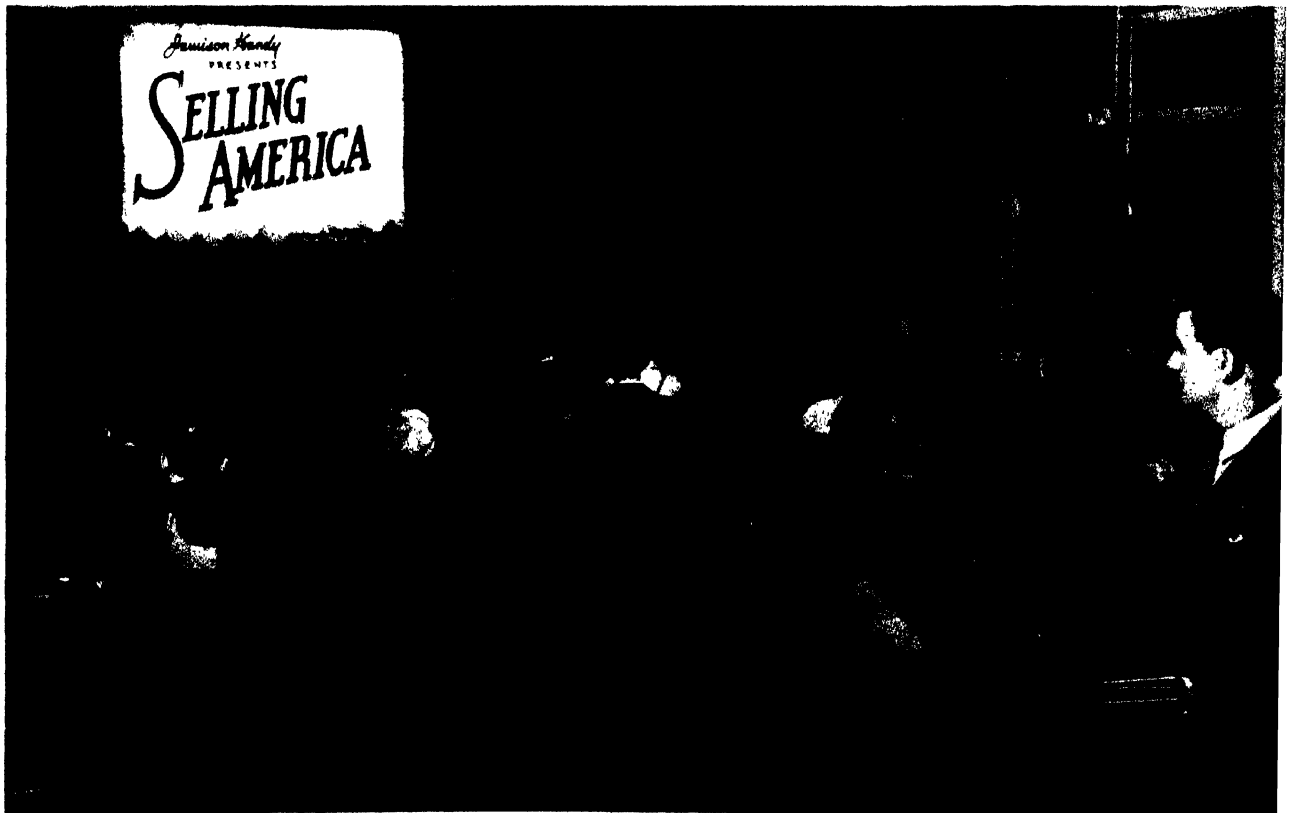
Planning sets, camera location and lighting was part of the students' work in this Denver project, supervised by Eugene Herrington of the Denver schools in co-operation with the American Council on Education. More than 400 schools have produced motion pictures.



Even would-be film stars are taught by the speaking screen. Here a dramatic coach for Warner Brothers gives her class of contract players a practical picture demonstration of the "right" and "wrong" way to kiss before the camera. The man should kiss the girl's lower lip, she should kiss his upper lip. His left arm should go over her right shoulder and his right arm around her waist. Faulty "approaches" distort the action, hide actors' faces. Actual screen demonstrations are best for showing young actors final results.



A historical scene from Audio Productions *The Search for Security*, a life insurance film.



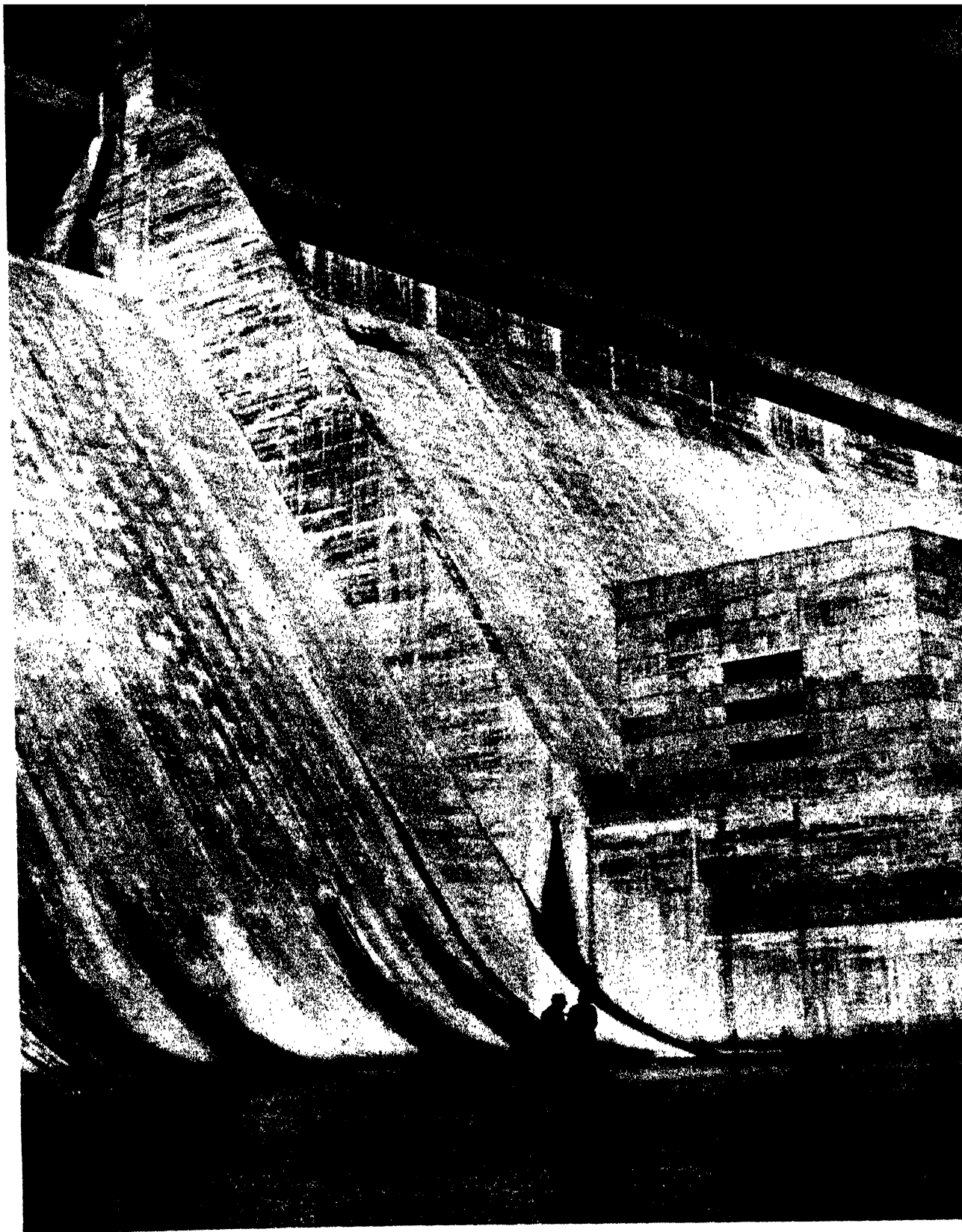
"Educational" uses of sound film include teaching of sales techniques by industry.



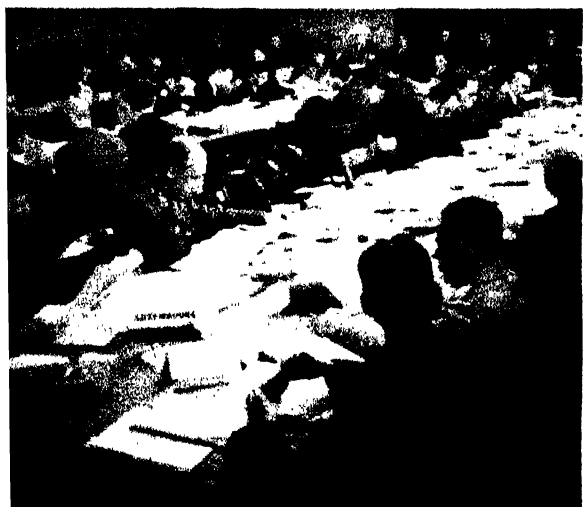
Government films improve Americans' social education, show them how other Americans live.



A powerful musical score gave *The River* high emotional content. This film on soil erosion



. . . and its cure, ranks among the best of America's documentaries.

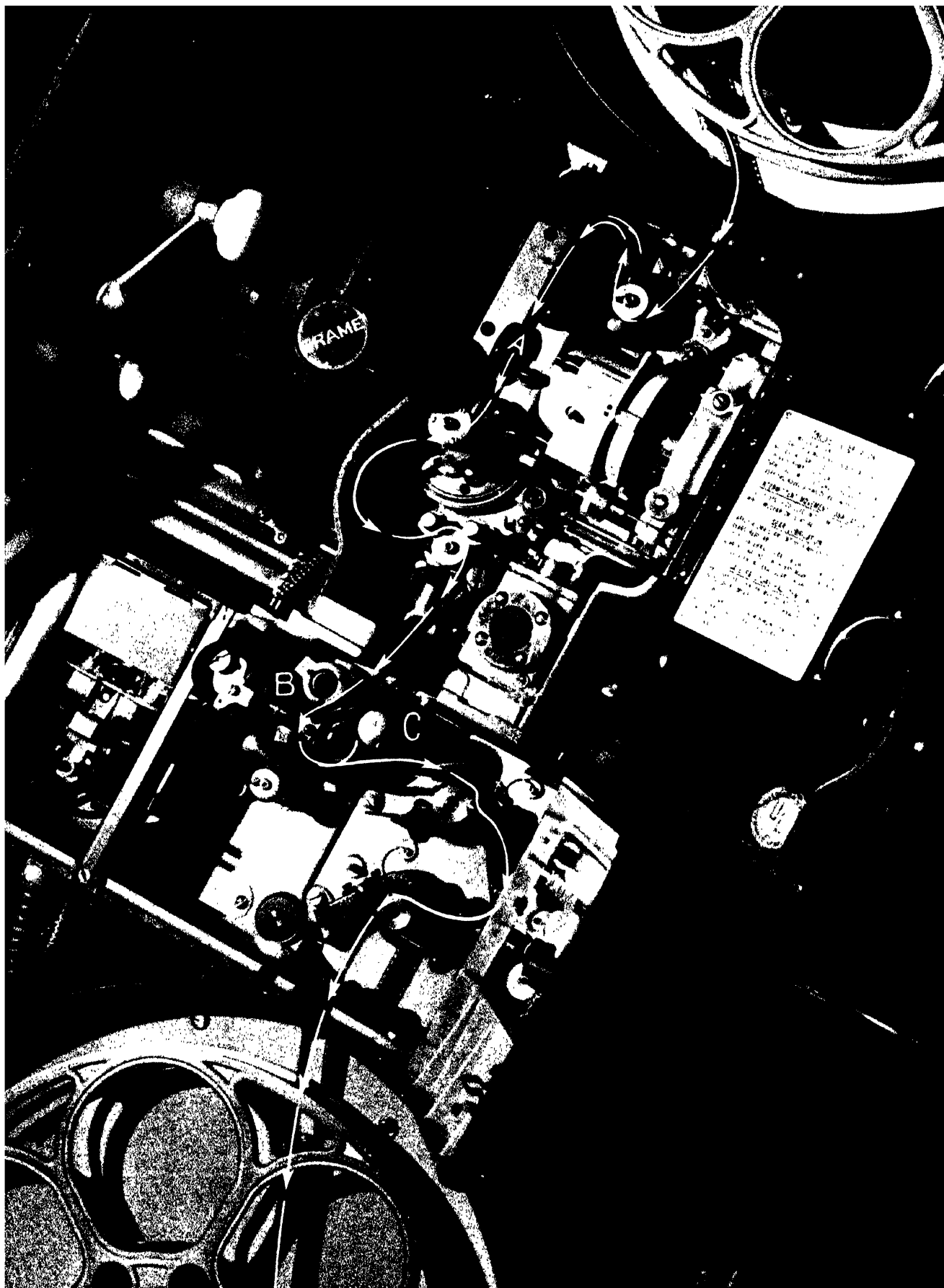


In films like *San Francisco—1945* (above), the screen attempted to educate the public to the issues of peace. This picture was made by the State Department to inform Americans about the first United Nations conference, held to set up the structure for international peace. Given full freedom to report, the sound film can contribute to open diplomacy.



The next generation, still fighting a war for survival in some parts of the world, can thank newspapers, radio and the talking screen for bringing vital issues to public attention. Just as the screen warned of international aggression so it is now prepared to awaken nations to their tremendous responsibilities in peace: the hungry, the homeless, the oppressed.

Part III - SOUNDING THE FUTURE



CHAPTER EIGHT

Juicers, Grips and Dollies

SOUND motion picture projectors, like the one on the left, cost as much as \$3,500 and represent American technological skill at its best. Their ingenious workings are familiar to more than 35,000 trained operators.

Watch the film strip unwind from the top reel, pass in front of the light (A), which together with the lens projects the image on the screen, travel down to the lower section of the projector in front of a light beam (B), shining through the sound track onto a photoelectric cell (C), which sets off the sound reproducing mechanism, and finally wind up on the empty reel below. The picture frames flick past and stop, then start again—at the rate of 24 per second—but audiences are unconscious of these minute jerks and experience only the illusion of motion.

For "movies" really don't move. They simply flash a rapid succession of stills before your eyes. A characteristic of the human eye called "persistence of vision" does the rest. "Persistence of vision" is the momentary retention of an image which has disappeared. The sound track cannot jerk in this fashion, it must flow smoothly, since there is no "persistence of hearing." If the sound track stopped 24 times a second, the music or voice would be interrupted. Therefore, the two cannot be projected simultaneously from the one position. To allow for the distance between the two light beams, one for sound and one for sight, the sound track must be printed approximately 20 frames ahead of that picture frame to which it belongs. When the film reaches the photoelectric cell for sound transmission, it is flowing smoothly—so the sound will be uninterrupted.

Even more complicated than this projection technique is the exacting process of *making* a sound film. Nothing is left to chance in the steel and concrete sound stages, mixing booths and re-recording rooms of a modern film studio. The search for improved recording and reproducing techniques has never abated since the days of Edison's kinetophone, and the film industry has encouraged extensive research programs on problems in recording and reproducing sound. World War II accelerated this research just as the communications work in the first World War hastened the development of the original sound film.

Smaller, lighter electric motors, smaller vacuum tubes, methods of shock-proofing and protecting equipment, improved films and lenses are some of the contributions made by war-

time scientists to Hollywood laboratories. Of particular value was the war research on microphones, loudspeakers and light sources. Recordings on shipboard and close to the front line were made with steel wire instead of disc or film. Recording outfits unable to work in inaccessible locations because of bulky equipment may thank the engineers who applied this wire recording method. It will not replace film recording just yet because of a difference in quality. However, where recording is made under conditions of intense vibration and where the immediate playback is important wire recording will be invaluable.

The great strides in color film techniques made by the armed forces carried with them new types of sound track and reproduction methods to be used with such films. Characteristic of this development is the discovery of photo-cells sensitive to the blue end of the color spectrum. Sound reproduction in color films should improve tremendously, thanks to these war-time discoveries.

Twenty years ago, sound engineers were grateful if they achieved synchronization—and audiences were overwhelmed at the volume which emanated from the screen. Today, amplification and synchronization are taken for granted. Their perfection often obscures a technical problem of which sound technicians are painfully aware.

Film audiences are not particularly bothered by the fact that sound in today's theaters comes from one direction—the screen. They may have jumped a little when Walt Disney's animated character answered off-stage in *Fantasia*, but this first commercial piece of stereophonic sound did not cause an upheaval in the industry overnight. The intimacy of natural sound will never be achieved completely until recording and reproducing are binaural instead of monaural. This means that sound must be picked up by two microphones to simulate a person's two ears, kept apart with two amplifiers, sound tracks and loudspeakers. To keep the right sound track channeled into the right ear and the left sound track into the left ear, the filmgoer would have to wear headphones. Obviously, this procedure would be too clumsy for regular use and expensive for theater owners. Using several loudspeakers behind the screen, sound engineers have created some auditory perspective.

In 20 years, the technology of the sound film has become so complex that 1,000 jobs directly on sound, 10,000 jobs indirectly on sound, 20,000 jobs in theater operations, 10,000 jobs in equipment manufacturing have been created. From the moment a picture is conceived until it is premiered, hundreds of sound experts share in its creation.

When the cameras begin to roll, the sound recording apparatus starts up immediately. The two are locked together. The actual recording machine may be three-quarters of a mile away on the lot, but sound is transmitted to it from the set. This is not raw sound as it is picked up by microphones on the set since a middleman controls it before it is actually recorded. This middleman—the mixer—has been a Hollywood fixture since the sound movie was born.

Someone has said "mixers are not trained but made." Most of the mixers started out as musicians, which is logical since musical accompaniment spelled sound pictures in the early days. Musicians controlled the volume of musical scores then much as today's mixers control the volume of dialogue. With a number of microphones placed about the set, the sound from

any location comes into the mixer panel at the volume established by the mixer. Obviously, if an actor is walking toward someone from a distance, his voice must be fainter than that of someone in the foreground. Simultaneous dialogue between two different groups must be blended by the mixer. The old earphones which identified the trade have given way to small bakelite "ear bugs." Each mixer has his favorite "bug," dead-sure that it has almost super-human quality.

As sound is captured on film, it is recorded on a disc for a playback check and immediate retakes. The original film is preserved against the wear of frequent playback checks. All a studio has to show for production cost is negative film during the shooting of a picture. And negative film is extremely perishable. One scratch and it is useless. Hence, the safe recording on wax.

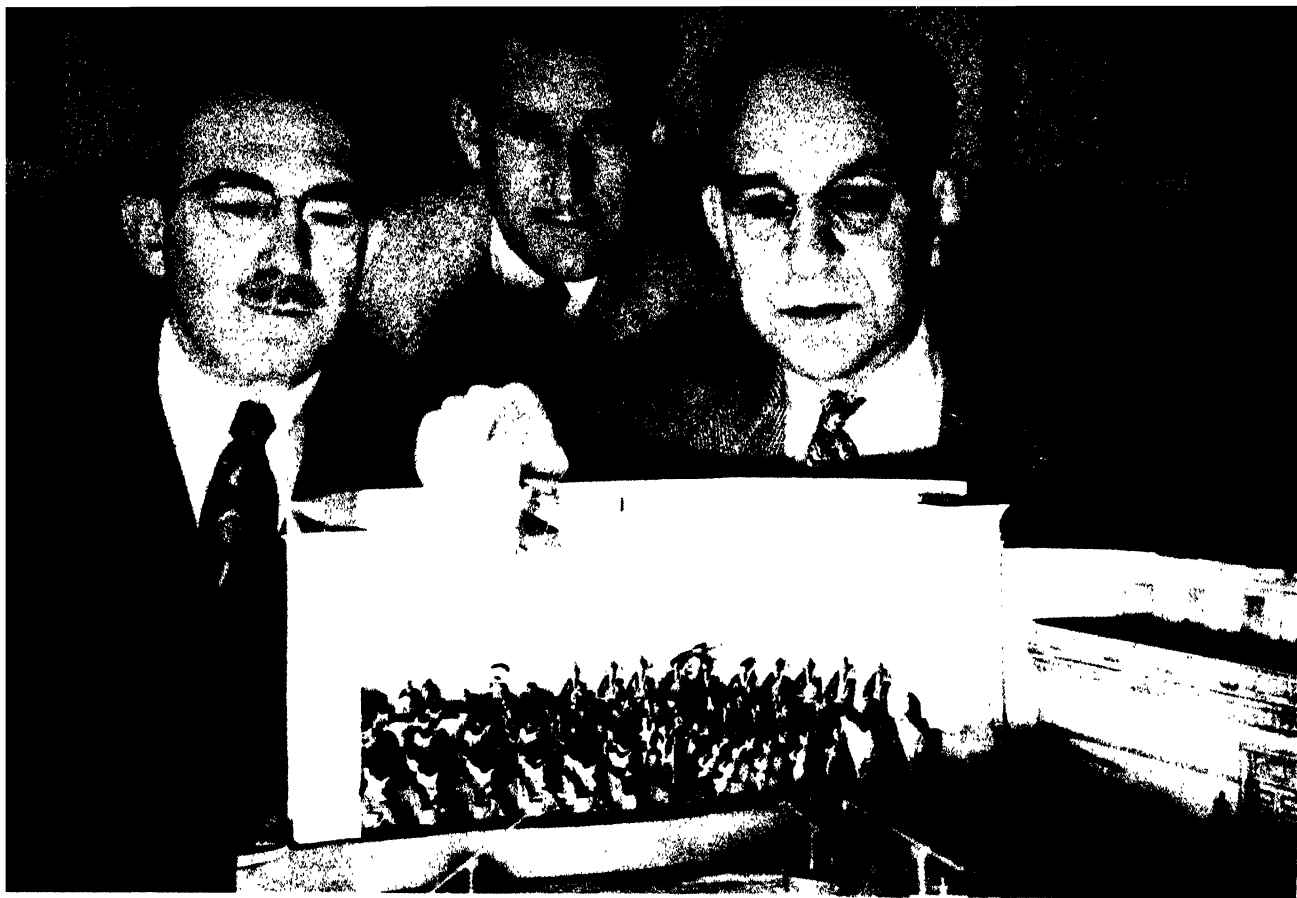
Daily "rushes"—after-shooting previews of the day's film "takes," viewed by the producer, director and sometimes the stars—are shown with both dialogue and action just as they were taken. As soon as this skeleton dialogue and action of the sound movie has been pieced together, cut and approved, the re-recording begins. In a control room, the musical score which was taken earlier and special sound effects are "dubbed-in" by an expert with a cue sheet. Then the sound motion picture is ready to be shown. This simplified explanation only suggests the massive technical work which goes into a modern film.

Sound engineers and theater operators work hand-in-hand to produce as full and realistic sound as possible. Major technological improvements during the last 20 years have simplified their jobs, but the human element cannot be replaced by the machine. Men who have made sound pictures their career are responsible for the realistic and artistic results seen and heard in theaters today. Behind them is a long tradition of invention and showmanship, and they are the first to recognize and appreciate that the scientific discoveries which created the sound film have increased the artistic potentialities of their work.

Without the microphone boom and similar equipment, sound films might have suffered irreparably with a static camera. Soundproof camera coverings permitted as much mobility as the microphone booms. The mixer panel which enabled technicians to blend dialogue and modulate volume allowed the use of more than one microphone. Portable recording equipment restored outdoor shooting and gave the sound movie the necessary scope and flexibility. The use of fine-grain developer reduced surface noises of the film and the directional microphone improved dialogue and music recording.

These inventions indicate what has been going on in studio laboratories for 20 years. In accepting a scroll of achievement from the Society of Motion Picture Engineers, Albert Warner paid tribute to the scientists without whose genius the sound picture could not exist. "You men perfected the machine. We supplied the showmanship. The importance of the engineer in the field of motion picture development has never been fully appreciated. Few persons know how much we owe you men."

On the pages that follow, the sound recording process is shown step-by-step . . .



Scale set models, like this one for *Humoresque*, are built to plan shooting of picture. Col. Nathan Levinson (right), Warner sound chief, moves a toy "mike boom."



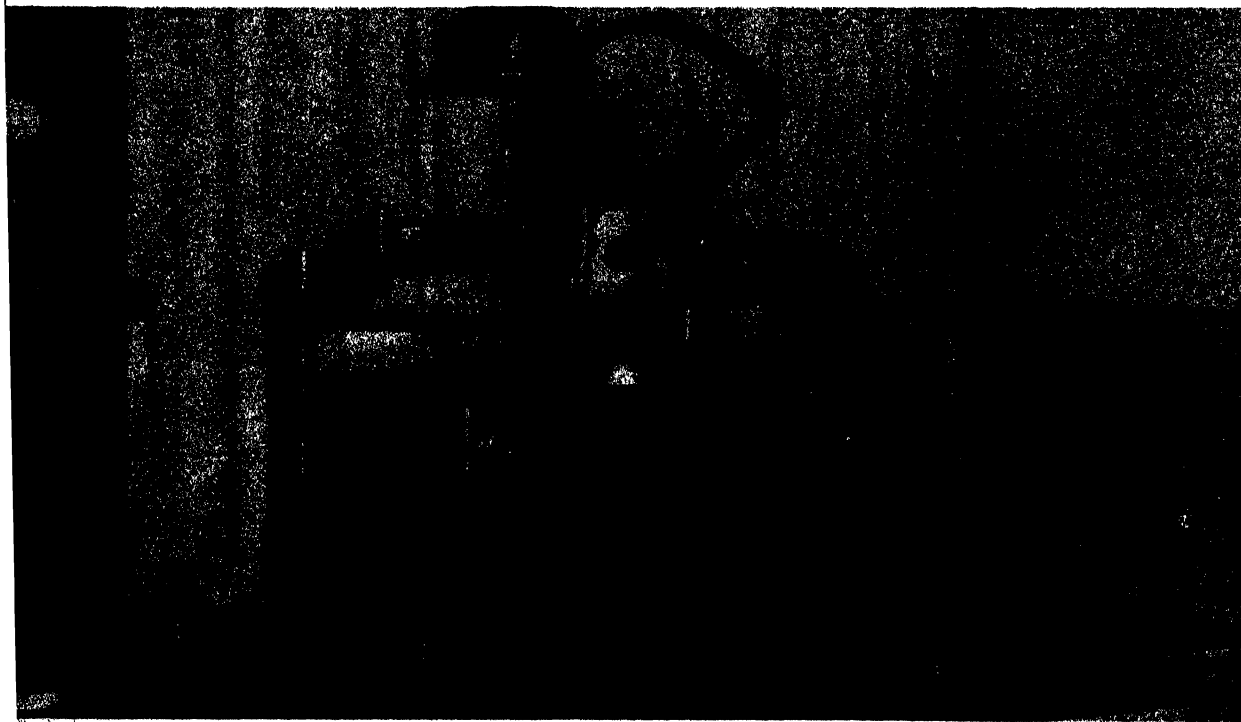
Actual shooting follows detailed sound and action scripts. The "mike" is lowered over the actors' heads and the camera begins to roll for a "take."



More than "mike," camera and actors are on stage for the shooting. Director Michael Curtiz checks the action with his script in hand. The sound-boom operator stands on his wheeled "dolly" (right) ready to reel in, lower or raise the "mike." It must be kept out of camera range but close to the speaking actors. In the foreground sits the all-important mixer at his controls. William Powell and Irene Dunne seem oblivious of all the technical activity involved in shooting one scene of *Life With Father*.



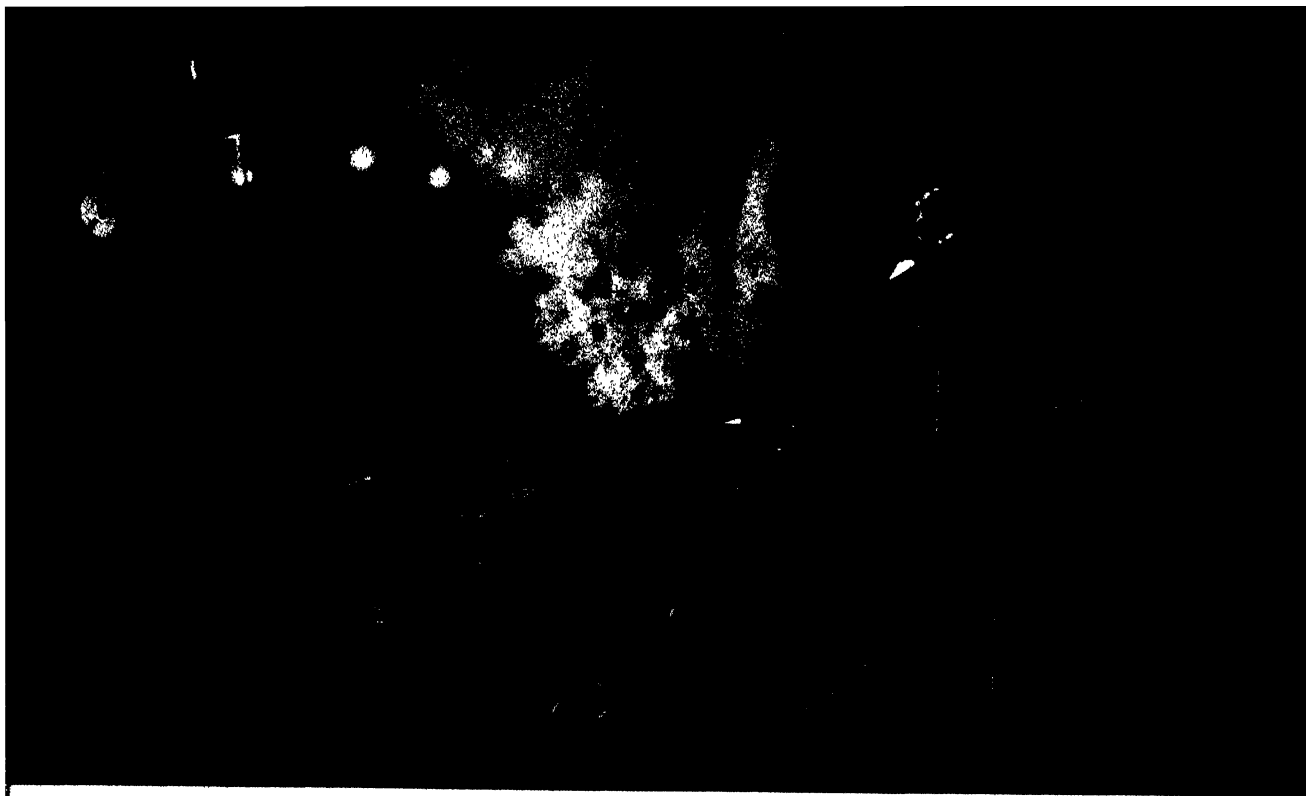
Sound picked up on the set is transmitted to the amplifier panels, above.



Greatly increased in volume, the sound then goes to the recording rooms. The disc recorder, shown above, is used for part of this work. Acetate records can be played back immediately as a check on dialogue.



The main recording is done on film, in the sound department.



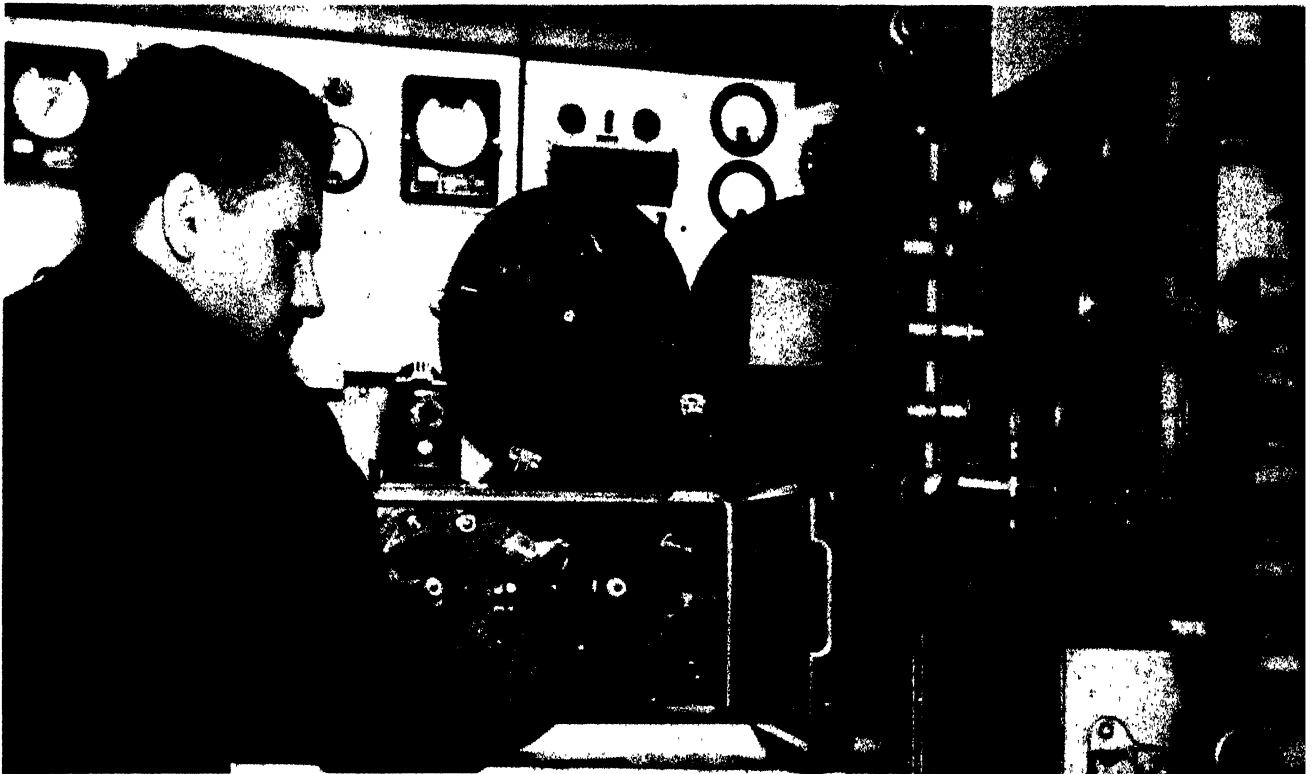
The explosion sound will be "duped-in" after the film has been developed.



The mixer (back) sits at his controls for outdoor shooting as well as indoor.



The recording crew goes on location in a sound truck (back, right).



Inside the trailer, a sound engineer records the dialogue on film.



Film must be cut and spliced together for the daily "rushes." The perishable film should be handled with care, and film editors wear gloves to protect it. An ingenious attachment on the projector makes it possible to run the separate sound and picture strips together. Round metal cans are used to store the sensitive film. This is where the film slang phrase "it's in the can" originated. The history of a piece of film does not end here. These cans are for temporary storage only.



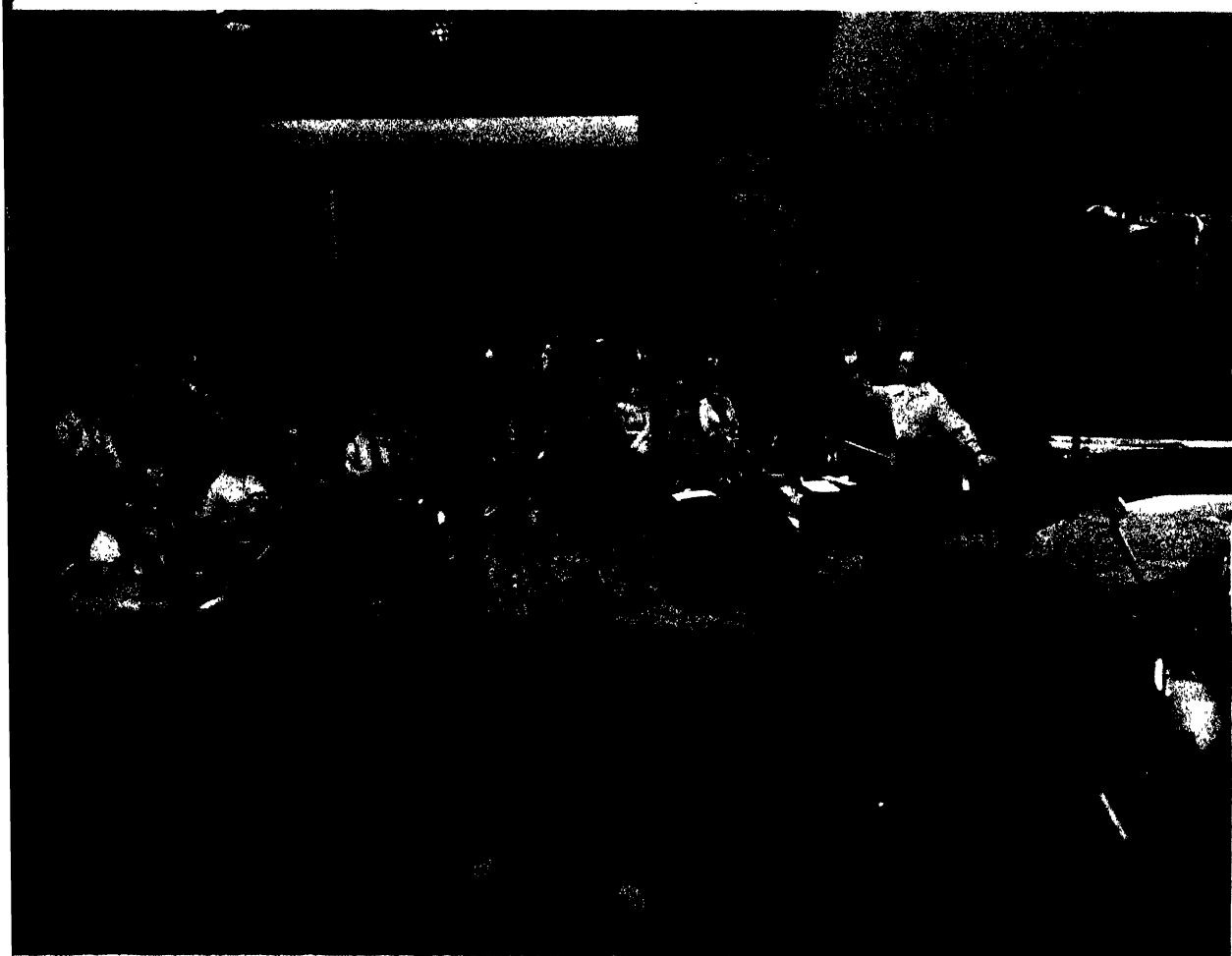
The director, star and producer view the daily rushes as a check on the film's progress.



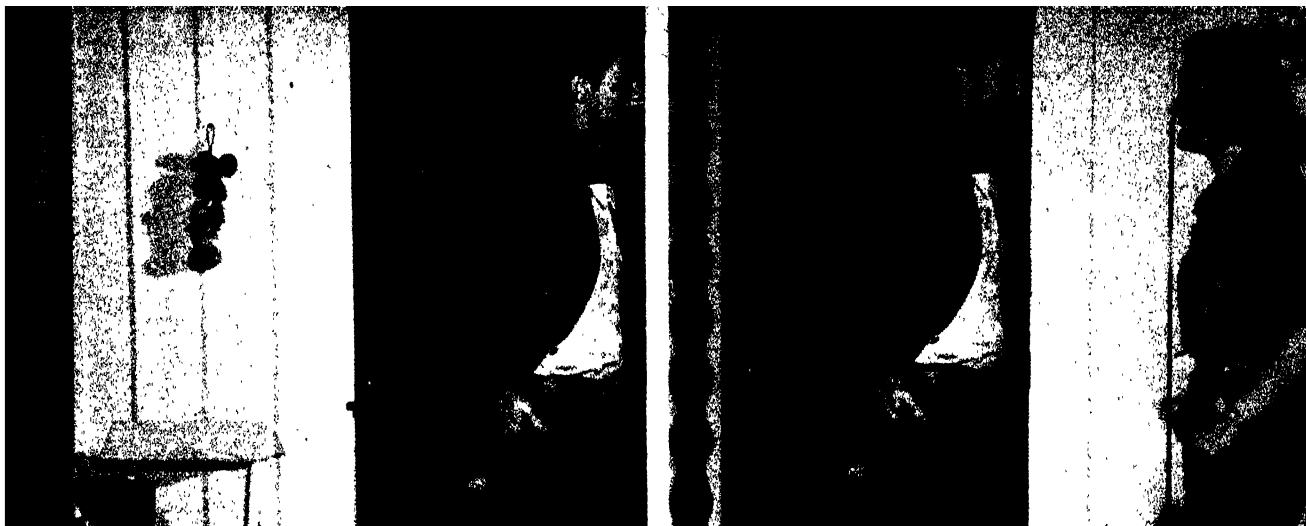
Stills from the rushes are usually as spontaneous as these cuts from *In This Our Life*.



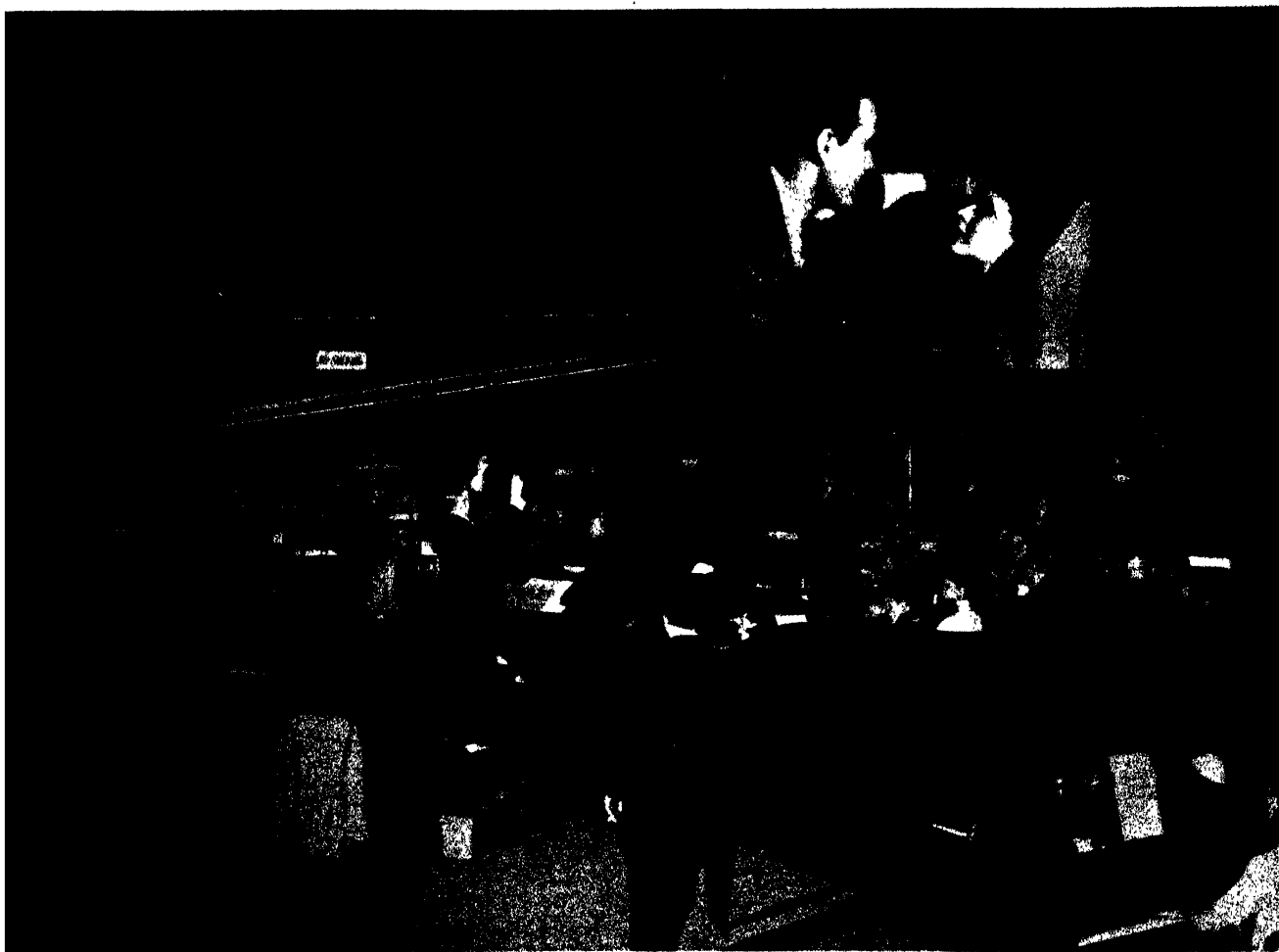
The musical director is leading the orchestra from dialogue cues picked up by his earphones.



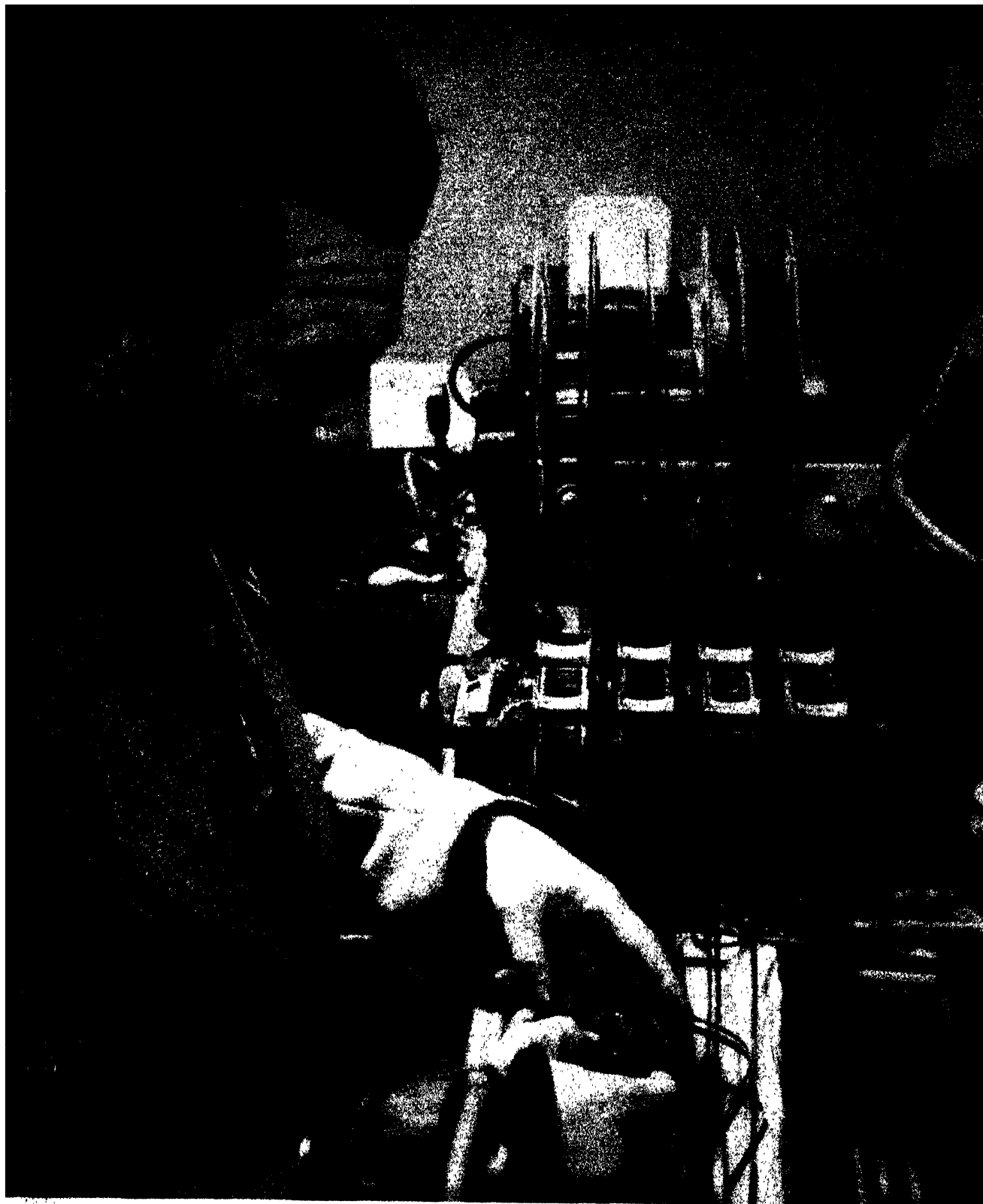
Here, Jose Iturbi and orchestra are recorded and photographed simultaneously. This is an exception to the usual practice of recording sound first, then photographing the soloist or ensemble to a playback of the sound to eliminate facial contortions.



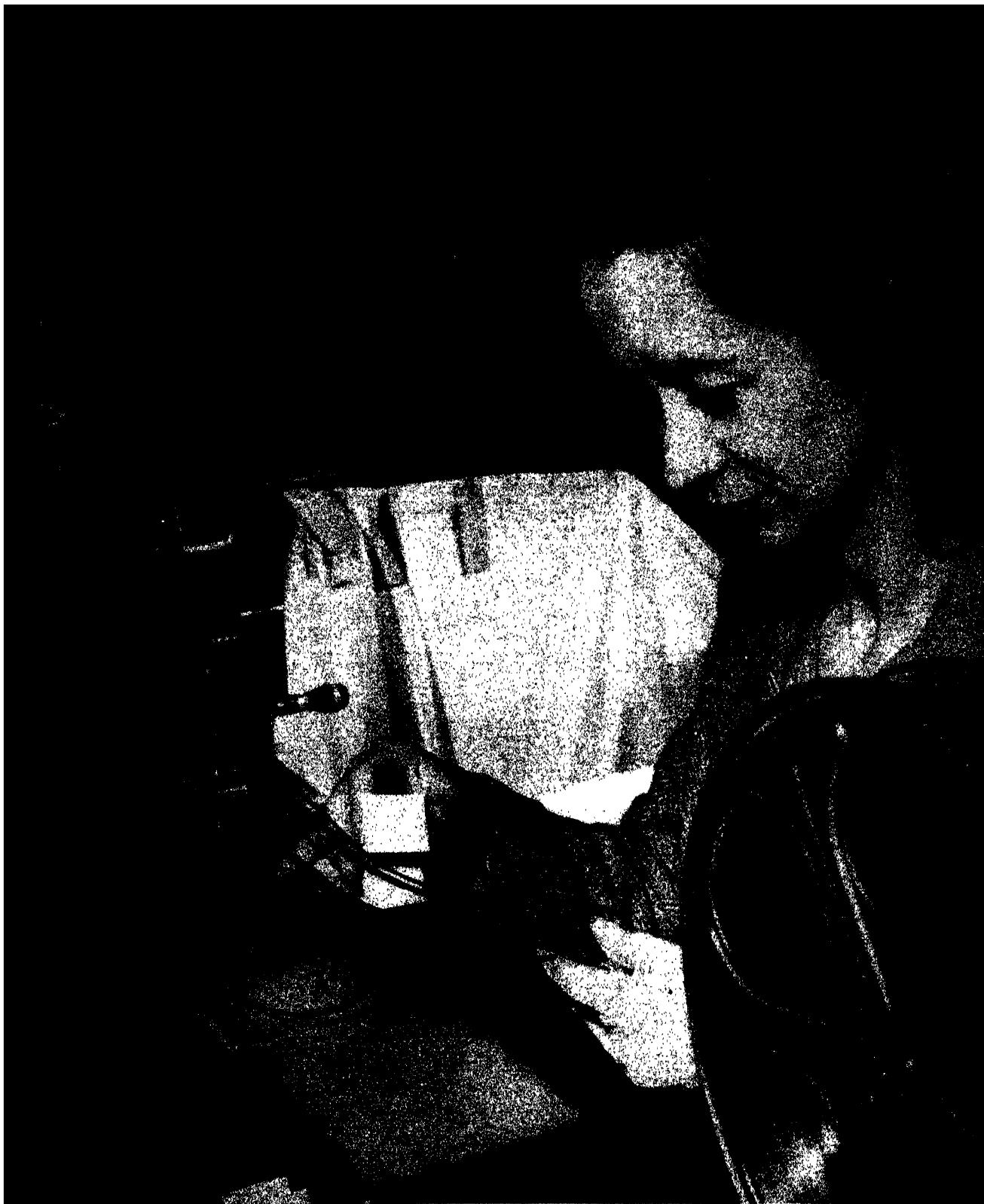
On the film strip, the sound track runs down the left-hand side of the picture frames.



When the musical score of a film is recorded, the orchestra and conductor (Leo Forbstein) watch the action projected on a screen. Music is scored after the film has been shot so that it will not suffer from cutting on the sound track and will run smoothly through the picture.



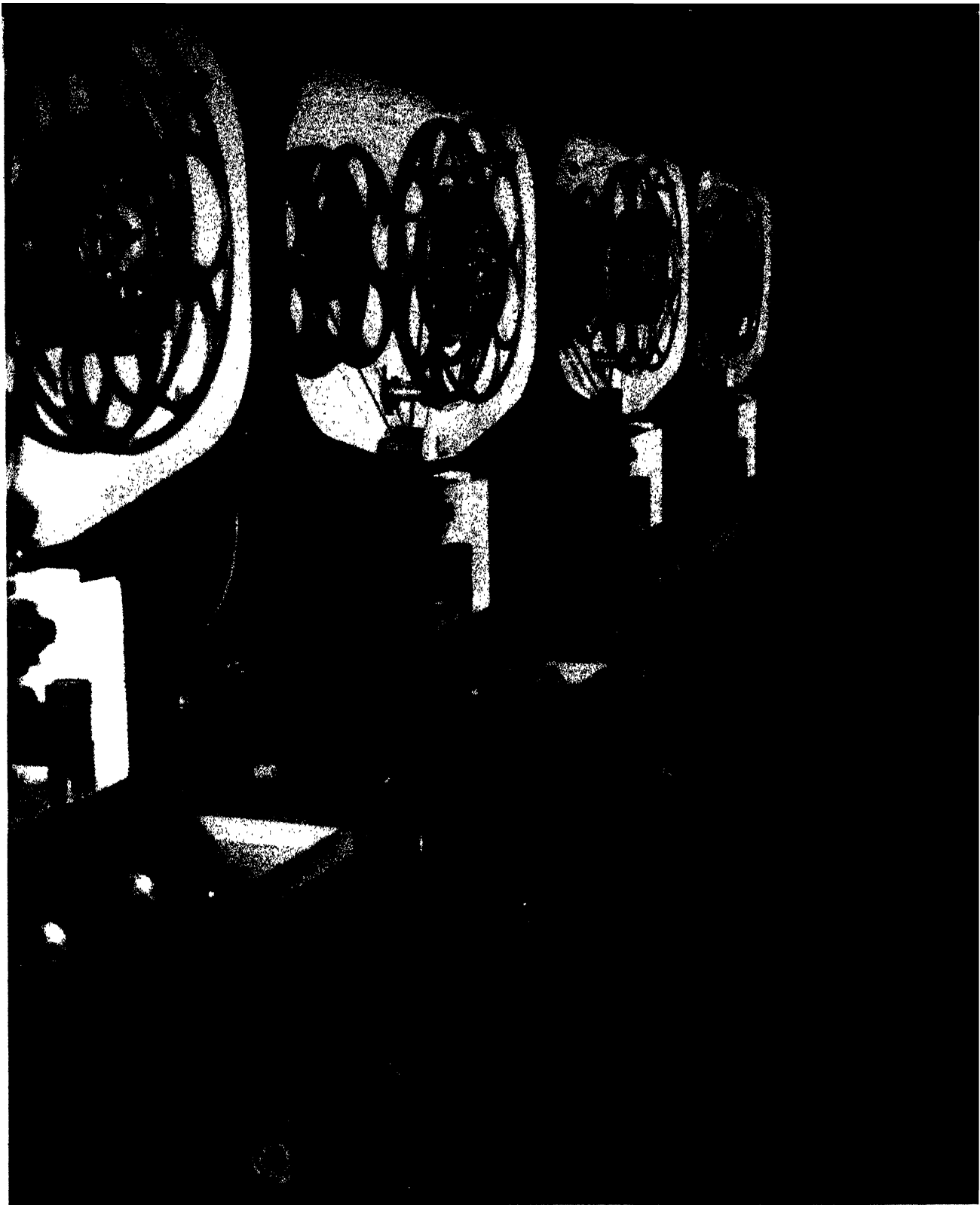
The sound track editor works like the film editor, splicing negative strips together by cue, so that the track may be synchronized with the picture. He works from a large bulk of film.



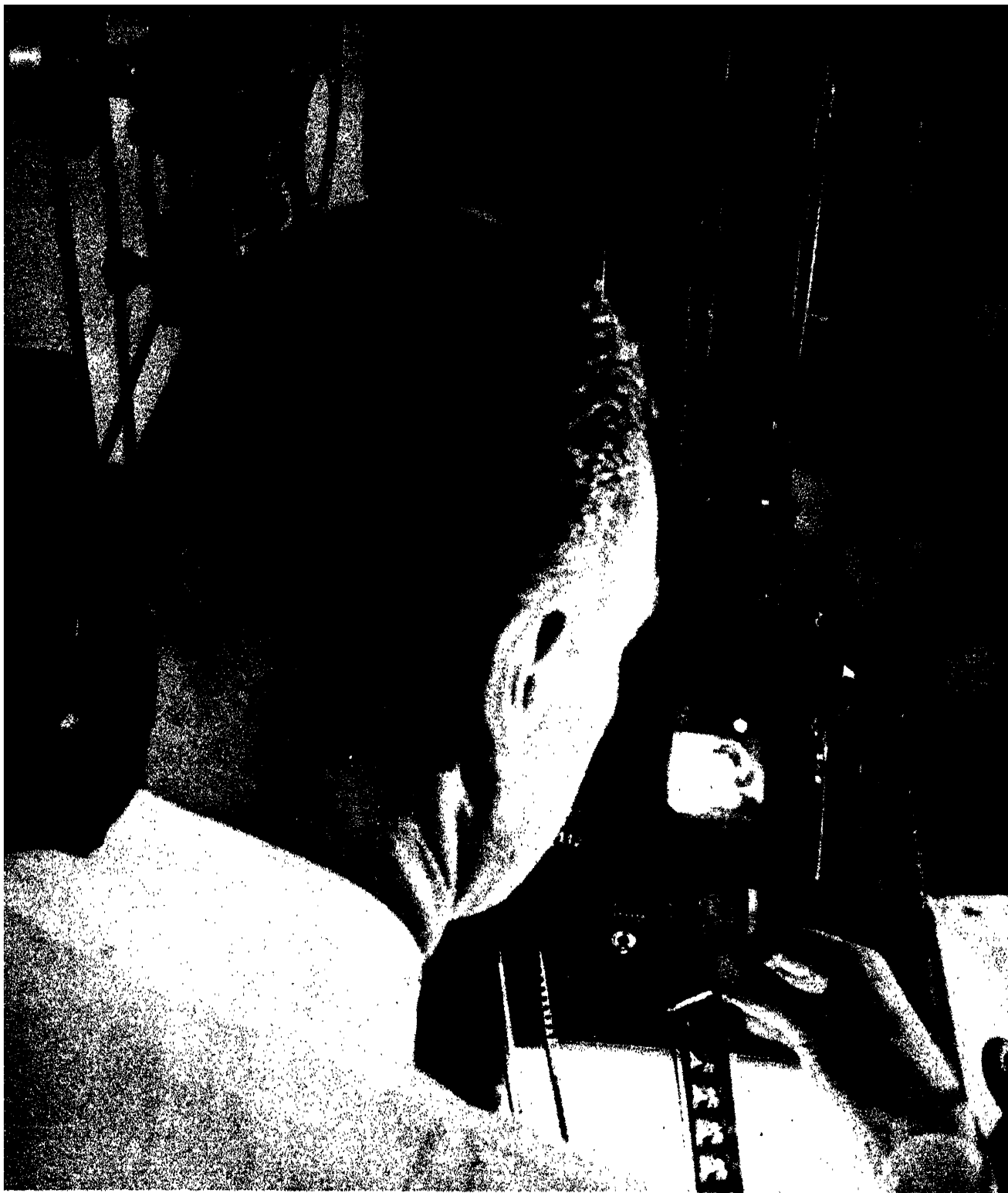
The mass of sound film is assembled, sorted and filed by workers such as this girl above. Actually, about 15 feet of film are discarded for every one used in the final production.



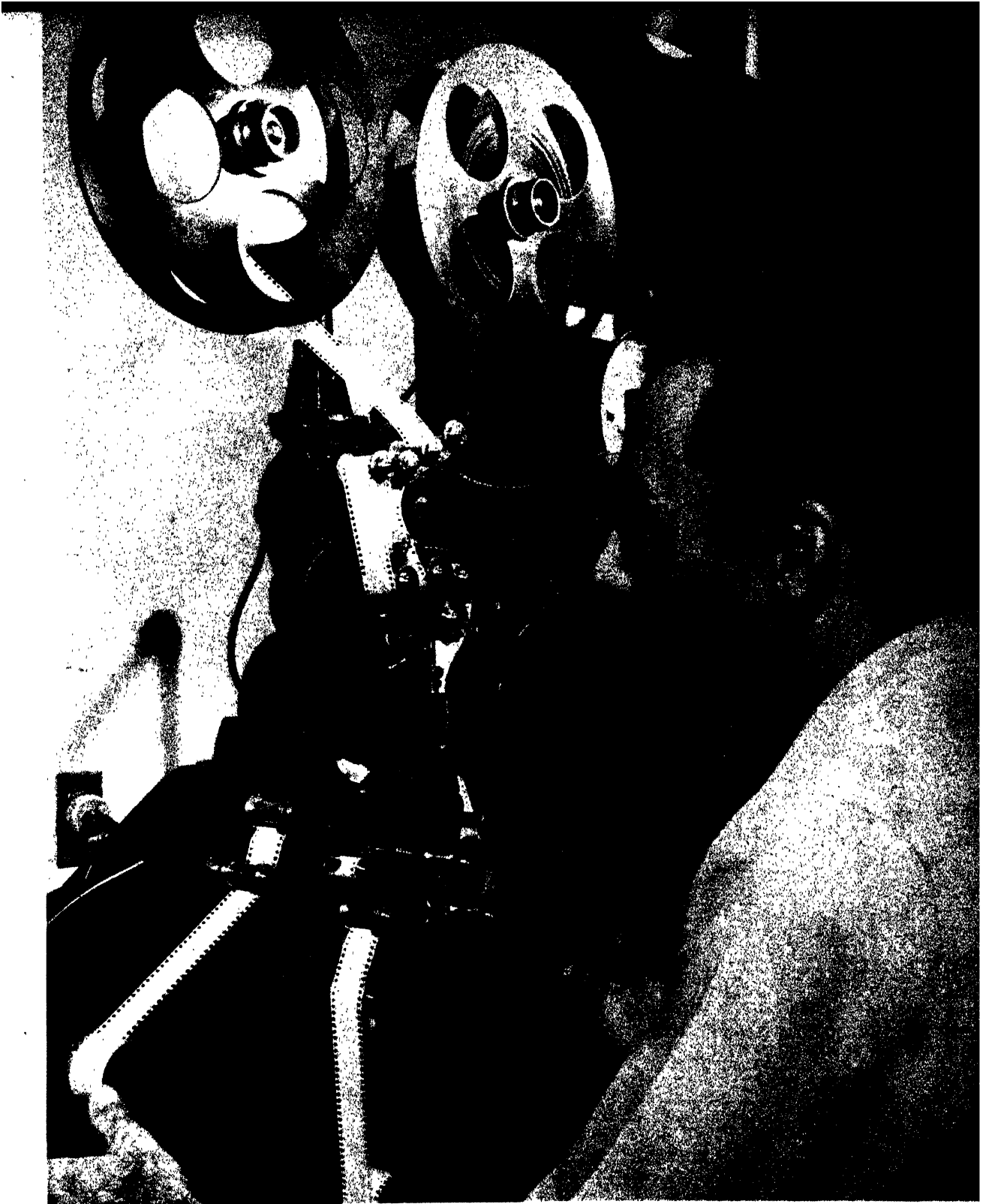
Here is the all-important re-recording room which has increased the flexibility of the modern sound movie. The man at the controls has assembled his special sound effects drawn from the studio laboratory. Unusual sounds such as the motor of a fast, special type racing boat, a delicate clock tick, a rare bird call are all on file as well as the widely used hand-clap, hoof-beat and crowd noise. He has selected the noises, which are called for on the shooting script, and has obtained the music sound track which had been prepared for the film. With a detailed cue sheet before him which gives the exact footage where the noise or music should be introduced, he re-records all these separate sound tracks on one master sound track. There are always three sound tracks for a film: music, dialogue and special sounds. Some pictures have as many as 22 sound tracks. They must all be incorporated into the master track, which is printed with the picture footage on one film strip. The technician at the controls must follow his cue sheet with split-second accuracy. When it calls for a gun shot at 289.0 footage, he must turn the knob previously designated for that particular sound.



In the next room, all the special sound tracks are assembled, ready to be kicked-off by his signal and recorded. Another sound expert handles the controls at this complex board.



In the movieola, which magnifies the tiny frames of the negative film, the film editor can watch the action while looking at the sound track on his left. This small machine has reduced cutting and editing time by half, not to mention the eye strain which used to be an occupational disease among film editors and cutters.



A sound track printer in the studio watches closely to see that the reels are working in "sync." Sound and picture negatives are developed separately, printed together.



After the master print of a sound film has been made, duplicates are printed. Stacks of these identical prints pile high in the printing laboratories until the reels are packed.



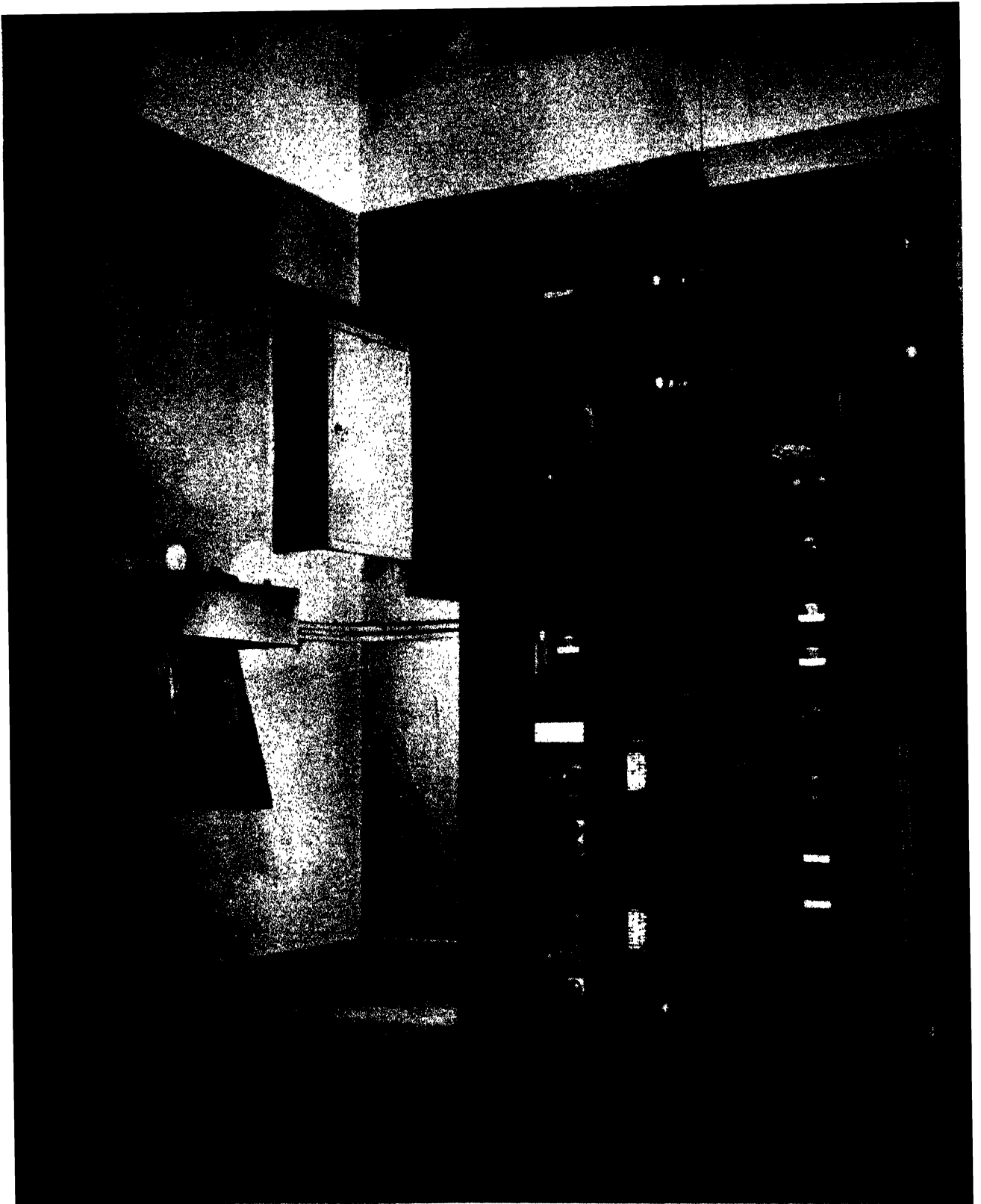
The complete feature, which can run to 17 reels, is packed in a metal case for shipping.



On highways, rails, water or air these cases travel to theaters in every corner of America and the world. From studio set to projector booth, the film is transported with record speed.



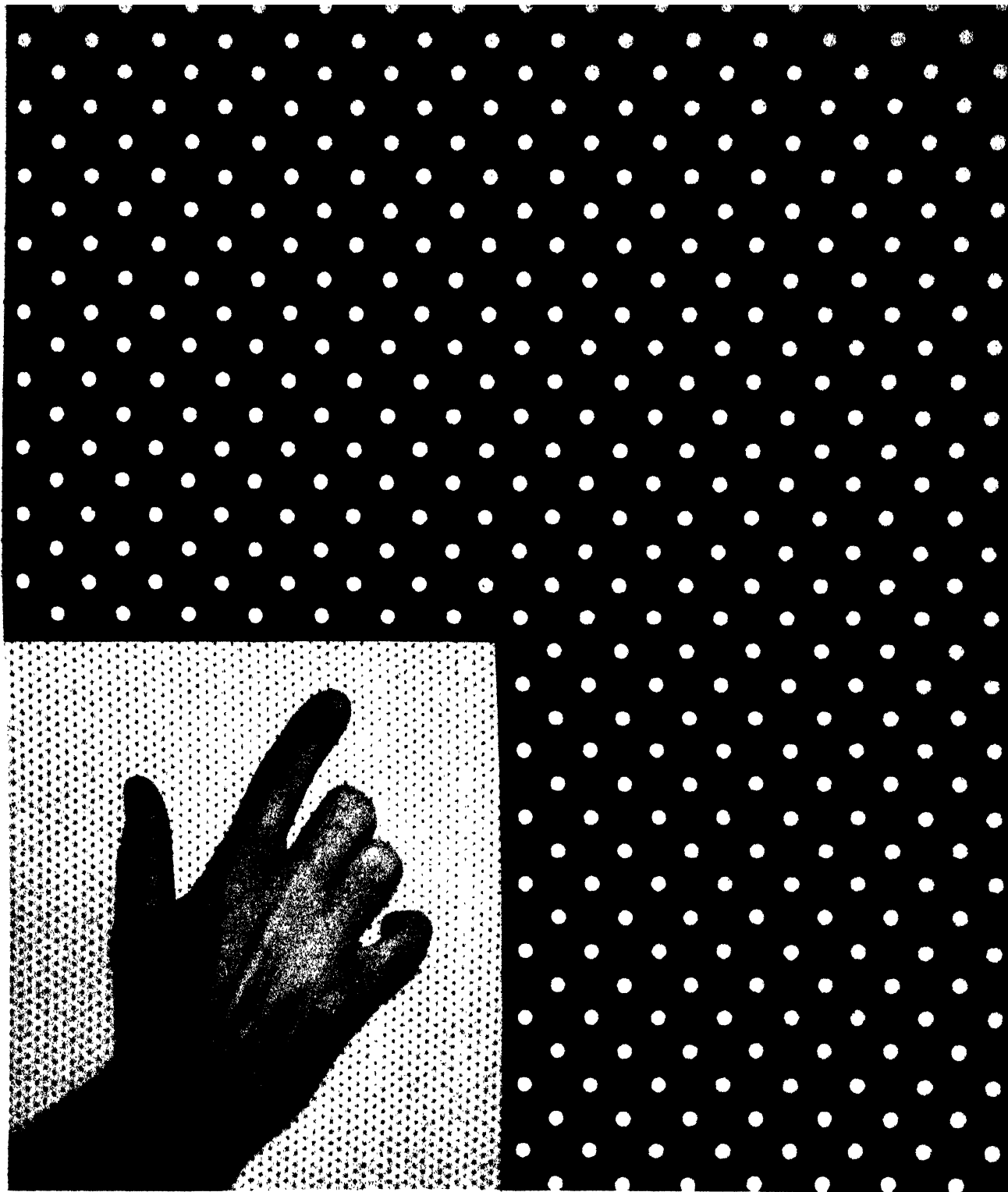
It took months to make that can of film—now ready to be unreeled by the projectionist above. Motion picture projectionists handle a billion dollars worth of entertainment yearly.



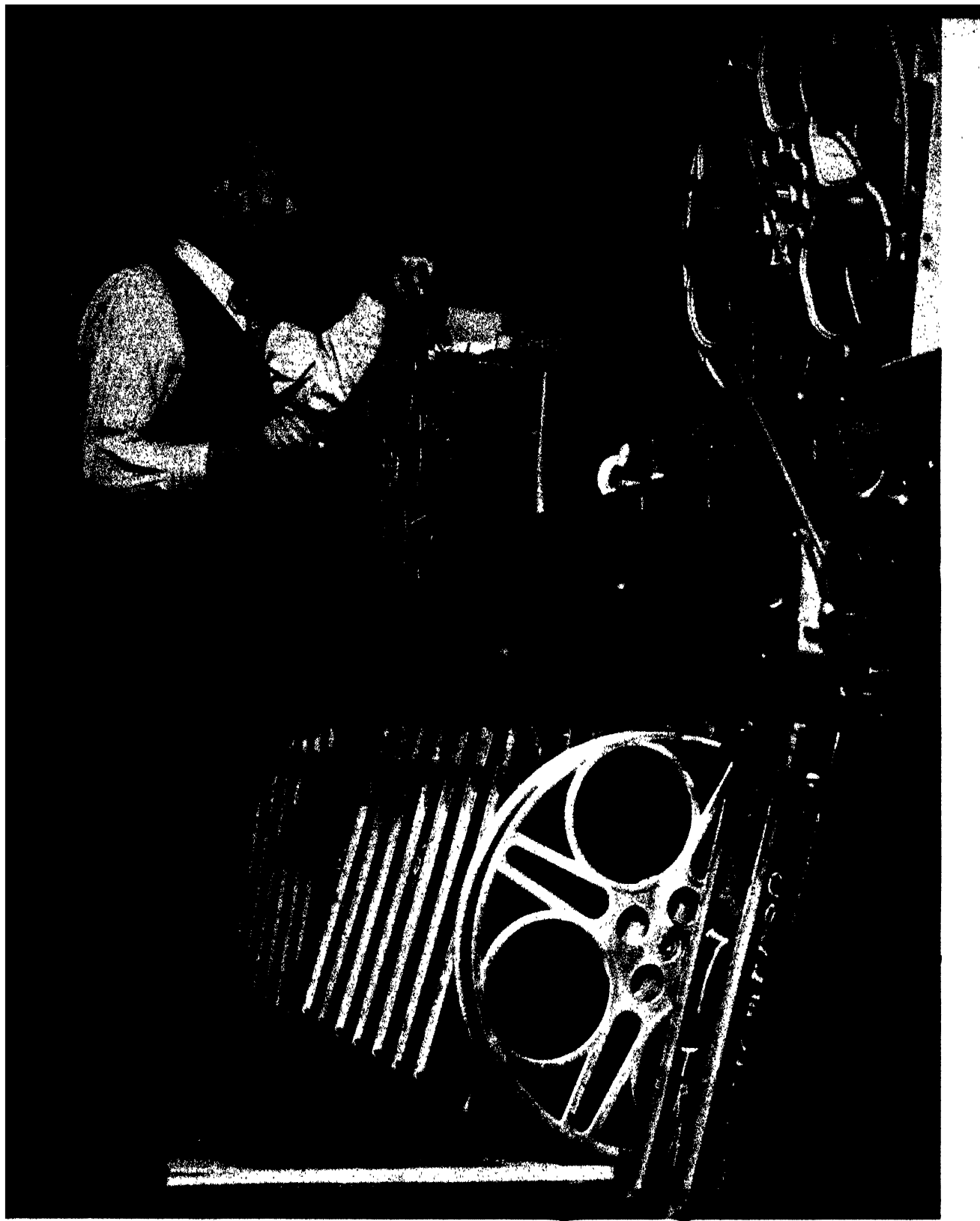
This amplifying panel in the projectionist's booth builds up the sound to proper volume. Modern motion picture theaters are electronic wonderlands compared to the early nickelodeon.



And this battery of loudspeakers behind the screen doesn't look much like Edison's horn.



The screen that moviegoers see looks like a smooth sheet. Next to a man's hand, it appears fly-specked. Actually, it is punctured with round holes to let the sound from the speakers come through. When magnified (right), the regularity of the holes and their size shows up.



Following each showing, the film must be rewound on this machine. After the theater's last showing, film is returned to the exchange for careful examination and rerouting.



Like another American invention, the airplane, films made in the United States are carrying our culture all over the earth, playing their part in the making of "one world." Today, films are shown on shipboard, on trains and in planes. This is the showing of a feature film aboard Pan American's London Clipper. The latest Hollywood releases, newsreels and educational short features are shown at night on the over-water leg of flights between New York, London and Paris. A modified 16 mm. projector, using standard safety film, is mounted in the rear of the cabin. Sound is carried through loudspeakers mounted in the ceiling. Already, film fans accept this latest innovation with nonchalance. A prospective passenger recently phoned Pan American to reserve a seat on the Paris Clipper, asking, "What are you showing next Friday?" When told that *Christmas in Connecticut* was the feature, she replied: "Oh, I've seen that—please change my reservation to next week."



CHAPTER NINE

"You Ain't Heard Nothin'"

MODERN audiences are moved by the striking realism of storm scenes like this one (left) from United Artist's *The Hurricane*. But they know little of the arts employed in achieving such verisimilitude. The camera can perform miracles—it can depict earthquakes, tidal waves, tornadoes; it can go into the jungle, under the sea and up into the stratosphere—and sound goes with it, or simulates perfectly what the camera sees. Why be surprised at anything Hollywood can do?

Compare this sophisticated attitude with the audience reaction at the history-making premiere of *Don Juan* and the Vitaphone shorts. After seeing and hearing Will Hays speak from the screen on that night 20 years ago, Michael Pupin, famous physicist and inventor, exclaimed, "No closer approach to resurrection has ever been made by science!"

The remarkable progress in sound technique since that memorable evening is still continuing. Some achievements of the past two decades indicate what the future holds.

Today sound is an integral part, not an adjunct of, a motion picture. Sound effect notes on the margin of a shooting script no longer suffice. In the modern conception of sound, musical scores and sound effects are part of the total construction of the story. An excellent example of this is Pare Lorentz' *The Fight for Life*.

In this penetrating documentary film on the birth of a baby and the death of its mother, Lorentz wrote a sound instruction sheet which was, in effect, the story itself. Lorentz actually created the musical structure of the film as he wrote the dialogue and planned the action. Then the music was written to order—fitting his outline with minute exactness.

Lorentz' instructions to the composer clearly indicate the transcendent importance of the music: "Every scene was directed to a metronome and for dramatic effect the music must start exactly with the film—from the moment we see 'City Hospital' until the baby is born, the best of the music must not vary, and there must be no change in instrumentation sufficient enough to be noticeable. . . . We must have the mother's heart beat, two beats in one, with the accent on the first one. . . ."

Lorentz contrasted the double musical beat of the mother's heart with a faster, fluttering beat to represent the baby's heart. When the baby is born, the sound track relates what is happening as clearly as does the camera. Lorentz states his instructions clearly: "The minute

the child is born, the baby's fluttering heart dominates the beat, so for this transition . . . a trumpet cry: a crescendo—any device you may wish to use for the birth pain is merely a cue for a different beat. Within half a minute, the doctor discovers the woman is dying—again the film is directed and cut to a specific time—the heart is pounding to hang on—the dramatic change in the score is that suddenly the mother's heart again takes over the slower beat surges under the baby's heart beat, and instead of growing weaker, musically, the heart grows in volume, if slowing in tempo, it goes Bang—BANG—BANG—BANG—and death is the sudden cessation of that pulsing beat—and we have only the baby's counterpoint sound to hold our interne until he walks into the corridor and starts for the street." The heart beat is the leit-motif of the entire score and is used whenever a pregnant woman is shown. This free, imaginative use of sound to build a total emotional impact—without whose help the picture could not stand alone—is the ultimate in the wedding of sound and motion.

The average feature film does not utilize such startling unity of sound and motion as that used in *A Fight For Life*. The content of most pictures does not demand it. But where it does, sound is used, not merely to reproduce reality, but to dramatize reality.

Specially written scores, which serve as counterpoint to action, dialogue and sound effects have become more highly charged with emotional meaning. American musicians have had an opportunity to write original scores for the movies. Motion picture scores by Max Steiner, Miklos Rozsa, Erich Korngold, Franz Waxman, Richard Hageman, Alfred Newman and others may ultimately become part of the great body of indigenous American music. Themes from musical scores have been published as songs and lyrics have been written for them in response to public demand. The popular song *Laura*, from the movie of the same name, is an outstanding example.

Audiences remember musical and sound effects from pictures as clearly as visual ones. No one who saw *Objective Burma* could forget the jungle noises which created an atmosphere of suspense. All the way through this film, sound played a vital role: scuffling boots of paratroopers, airplane engines turning over, the scratch of a match, a knife being sharpened, the thump of bodies as they hit the ground. As the paratroopers moved through the jungle toward their objective, the chatter of monkeys and birds, snapping twigs and a musical score which was based on these screeching jungle noises took the place of dialogue. After building up to a terrific pitch with sound, the film switched abruptly to deadly silence. As the paratroopers prepare to blow up the Japanese radar station, the acute silence becomes even more unbearable than the interminable sound had been.

The Lost Weekend was a film notable for visual impact. Yet one of the most unusual instruments ever used—the theremin—recreated Ray Milland's drunken feeling through its quivering sound. The long cavalry charge in *The Charge of the Light Brigade* was synchronized with stirring music and sounds of galloping horsemen. The screen version of *The Letter* used the rustling leaves of the jungle in a long opening scene to set the feeling of terror and mystery.

Silence is used constantly as counterpoint against sound, to intensify the emotional content of a scene. One movie in which the absence of sound had tremendous dramatic value was *The Spiral Staircase*, where Dorothy McGuire played a mute girl. In the entire picture,

she speaks only nine words. Early sound picture audiences would have felt cheated, but today's filmgoers appreciate the contrast value of silence.

Audience appreciation of unusual sound effects and imaginative background music has undoubtedly been conditioned by Walt Disney's sound-color-motion animations. The average Disney short, by virtue of its content, has more musical and sound tricks than a dozen feature films combined. Elaborate Disney musicals, such as *Fantasia* and *Make Mine Music*, demonstrate what imaginative stretches lie ahead for the sound film. The most expensive and elaborate sound recording ever attempted was the recording of the Philadelphia Symphony Orchestra for *Fantasia*. Several simultaneous sound tracks were recorded on separate microphones, amplifiers and recording machines so that the various orchestra sections could be combined later in any proportions desired. *Make Mine Music*, called by one wag, "The poor man's *Fantasia*," aims at a broader audience. Nelson Eddy, the Andrews Sisters, Benny Goodman are featured as the voices behind the cartoons. The musical instruments themselves are animated and move the way they sound. The green clarinet dances and whirls and powerful waves of music break and spray into musical notes.

Nearly every sound, which can be *conveniently* recorded, can be successfully recorded and reproduced today. The storm effects in *The Rains Came*, *Typhoon* and *Hurricane*; the 20-minute long earthquake rumblings in *San Francisco*; the fire effects in *In Old Chicago*; the locust effects in *The Good Earth*, and underwater effects in *Destination Tokyo*—all are typical of the variety of accurately reproduced sounds audiences take for granted.

Such musical scores as those written for *The Informer*, *Spellbound*, *Lost Weekend*, *Adventures of Robin Hood*, *Song of Bernadette* and *Saratoga Trunk* stick in the memory of filmgoers long after they have forgotten the picture—or what is more important, a strain of music when heard evokes the scene with which it was integrated. Audiences must feel what Pare Lorentz asked his composer and arranger to give him: "Voice and music must come into the picture and fade-out, not in synchronization, but in volume and mood, so the audience does not know actually whether it is hearing only words, or only music, or both."



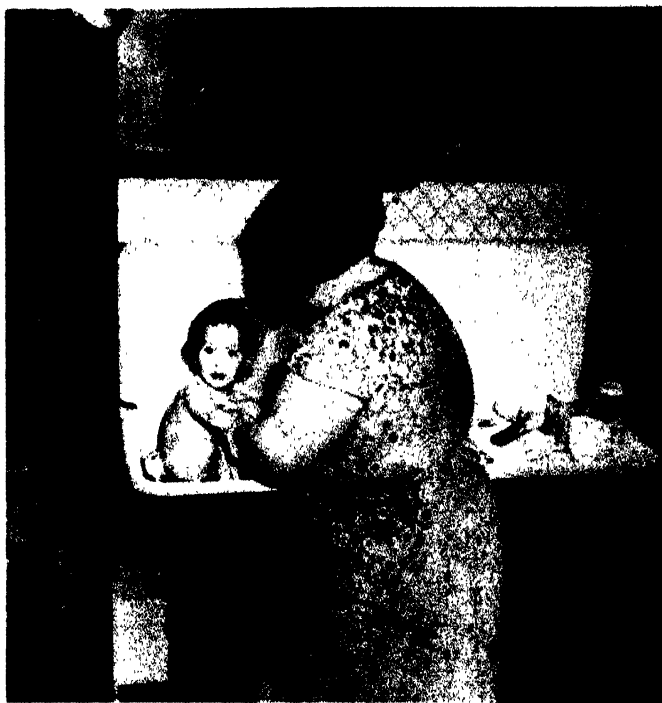
The Fight For Life opens in the delivery room with a woman under an anesthetic. The duet of bass and tenor drums breaks when she dies and the tenor drum, the baby's heart, carries on.



The interne delivers the baby and as he leaves the delivery room, music is "sneaked under him"—music which reflects his frustration at losing a life. He walks out of the hospital . . .



. . . into life and death-breeding slums. The music, in Pare Lorentz' words, becomes "gut-bucket blues to hit the audience with gin, women, despair, cruelty and life as crude as it is."



As he sees the filth of the city, he wonders why we even bring children into the world. A sad lullaby, drawn from the folk music of many countries, is the *leitmotif* of the sequence.



Fox's *In Old Chicago* was one of the most difficult sound pictures ever made. It was also one of the most exciting to see and hear. Crackling fires of the great Chicago disaster were accurately and dramatically reproduced. As gushing hoses played over burning houses and buildings crashed to the ground, sound engineers captured the clamor of the scene. Unleashed natural forces challenge sound artists who use them as the basic structure of today's films.



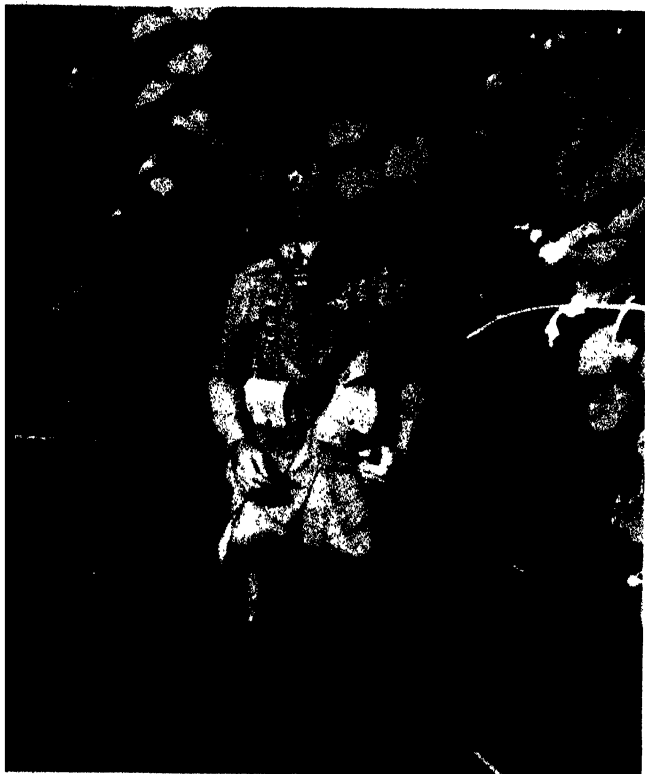
In *San Francisco*, made by MGM, a lengthy earthquake scene was the climax of dramatic action.



In *The Rains Came*, a Fox production, the ceaseless storm was the real villain of the story.



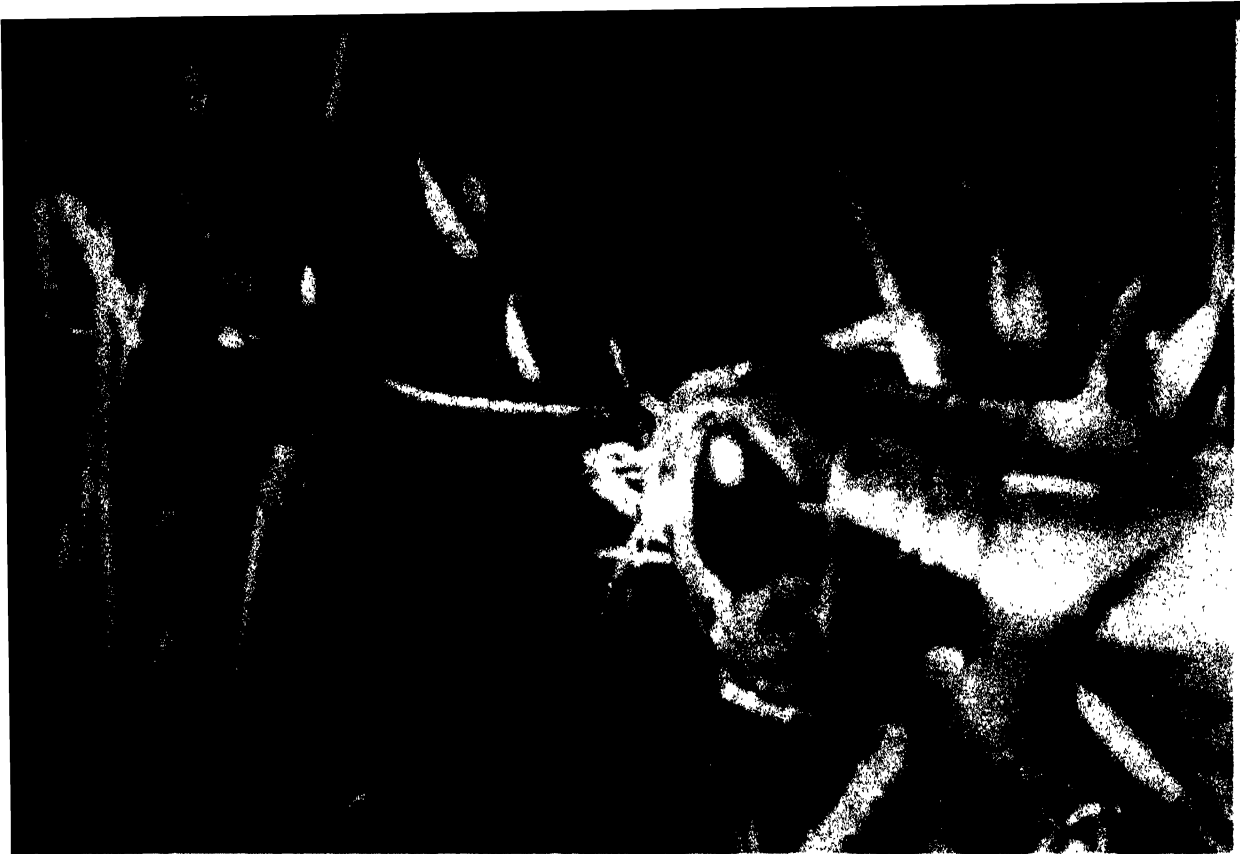
Objective Burma tells the story of paratroopers, led by Captain Nelson (Errol Flynn), on a dangerous mission into Burma. When they hit the steaming jungle, every rustle may betray them.



On the move night and day, without rest, on emergency rations, the small band creeps through the bush. The splash of water or snapping twig may be heard by a Japanese sentry.



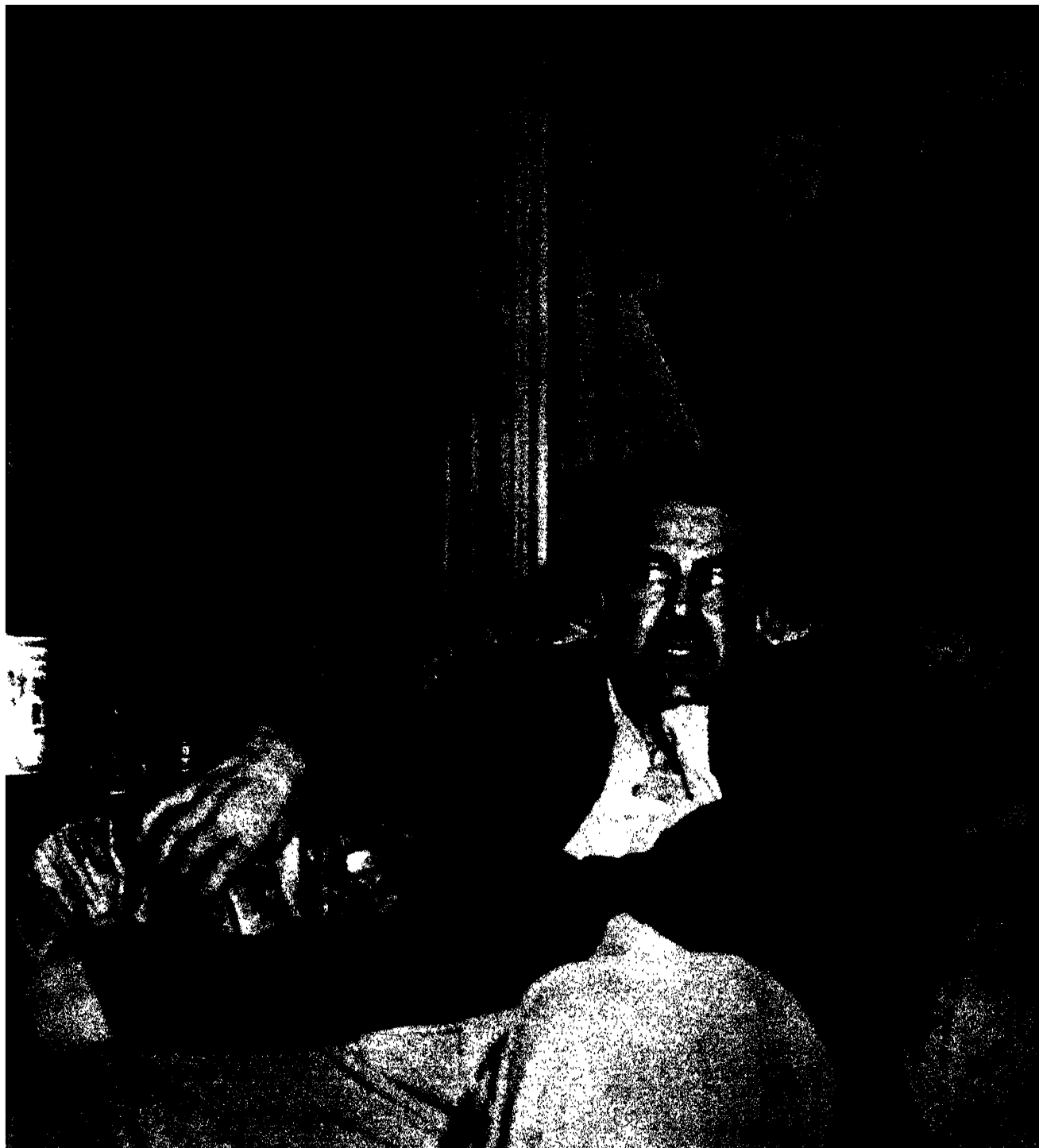
Captain Nelson holds his breath in the alien jungle, listening for sounds of an enemy outpost. As they approach the radar station, Japanese chatter and a bugle call signals mess. The paratroopers scatter to set their demolition charges as the sound cuts abruptly to dead silence. Sound contributes to every aspect of the action. The loss of their walkie-talkie leaves them isolated in the jungle until they hear the whirr of rescue planes.



The locust sounds in *The Good Earth* were as realistic as the photography. Swarms of whirring locusts darkened the sky over Chinese wheat fields and audiences sensed the impending doom.



Luise Rainer (O-Lan) and Paul Muni (Wang) in the fields, are oblivious of approaching locusts.



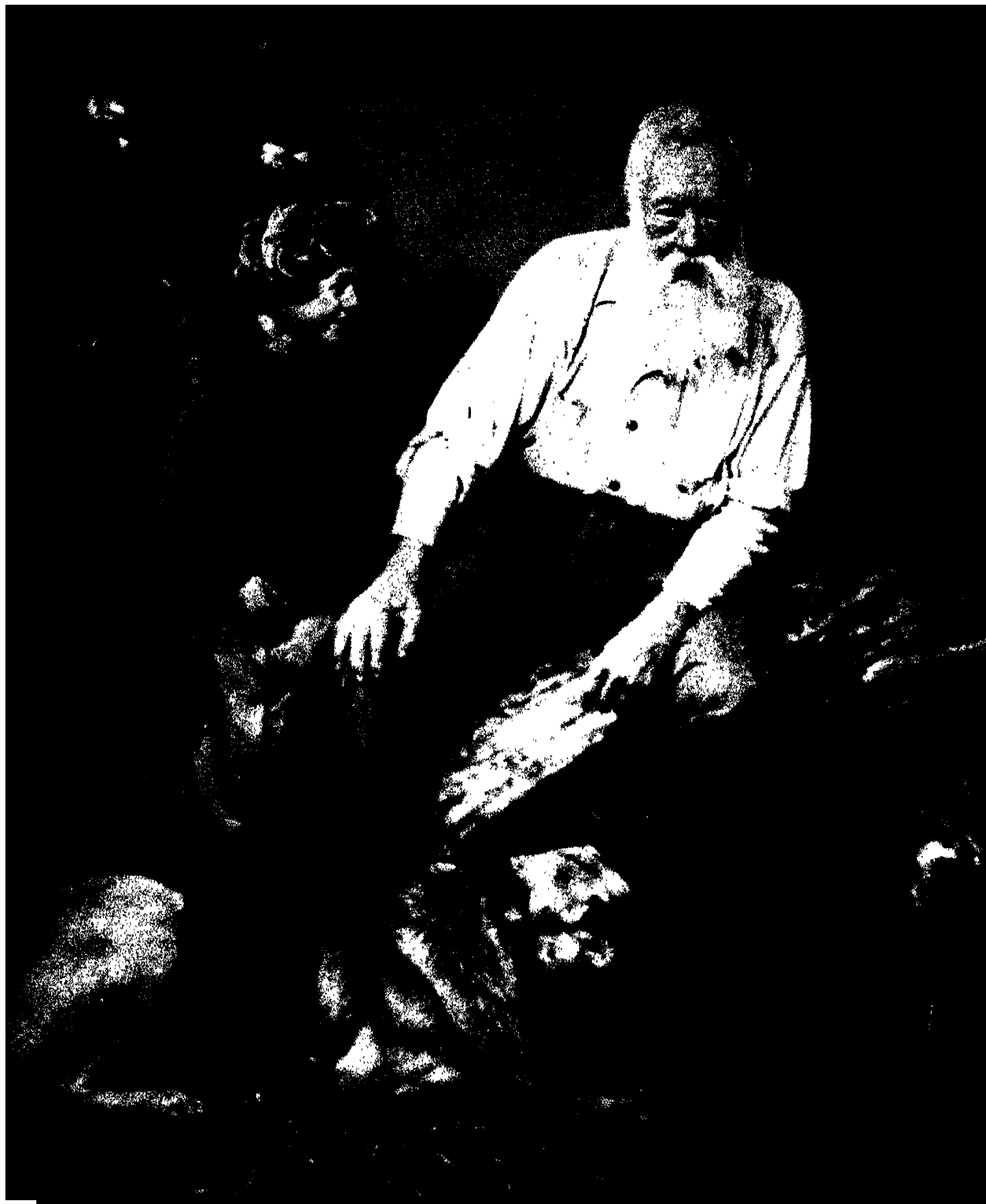
The Lost Weekend captured the mental and physical state of a drunkard through realistic camera touches and startling sound. As Ray Milland writhes in his chair, imaginary bats come out of the walls and the world turns over—wild and eerie sounds reflect his emotional confusion. This quivering instrumental music represents the DT's in sound and contributes immeasurably to audience identification with the victim. Musical scores have long been used to create emotional moods, but this is probably the first time music has truly expressed the emotions of an alcoholic.



As the schizophrenic killer in *Spellbound*, Gregory Peck wanders about the house at night with a razor in his hand. Quivering instrumental music reflects his mental insecurity. This musical effect, reminiscent of *The Lost Weekend*, was produced by the theremin. Throughout this psychological film suspense is built and sustained with Miklos Rozsa's subtle music. Today the entire range of human emotions is interpreted on the screen through both photography and music. These original scores bear little resemblance to the pit pianists' musical cliches.



As the cavalymen mass for their lance attack, a powerful sound track increased the suspense in *The Charge of the Light Brigade*. Battle sounds, pounding hoofs and stirring music carried audiences down "into the jaws of death, into the mouth of Hell" along with "the six hundred." The courage, hate and fear of men in battle was captured in Max Steiner's stirring music. And the battle clamor re-enforced this theme. The cavalry charge was the focal point of this romantic film, and its pace and power depended largely on the sound track.



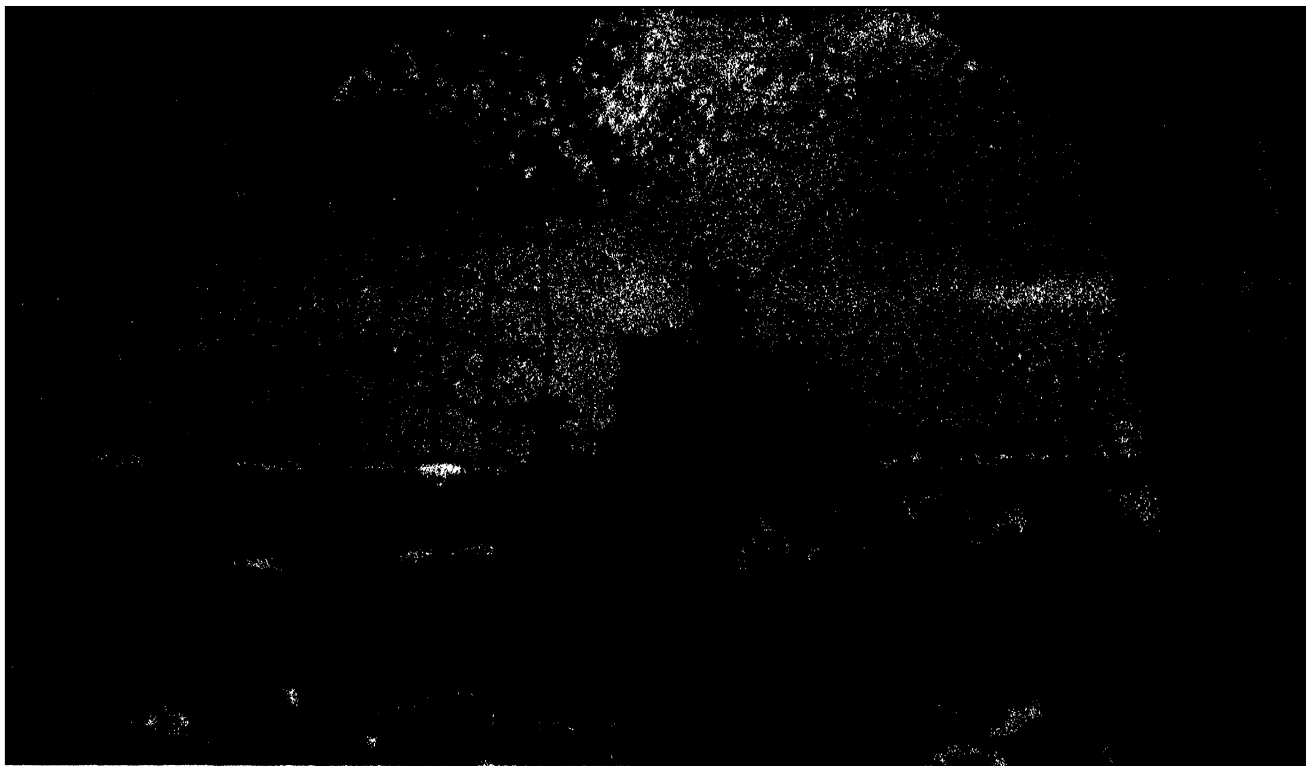
The Enchanted Forest tells the story of an old hermit who lives with the animals of the forest. He finds and cares for a little boy, chases the lumbermen from the woods and saves the forest from destruction. Studio technicians produced amazingly accurate sounds of the wind, a babbling brook, a dog, crow, hawk, fox, bullfrog, raccoon, mountain lion and a variety of birds.



Up until the moment Dorothy McGuire uses the telephone in *The Spiral Staircase*, she has been mute. Threatened by a fanatical killer, her speech paralysis creates unbearable suspense. The film becomes a murderous duel between silence and sound. Under the emotional stress of danger, she breaks the psychological silence which had gripped her from childhood.



Thanks to the vivid, story-telling power of sound, blind as well as "sighted" people can go to "see" a film. Here John Ferrara and his "seeing-eye" dog enjoy a picture. When he sits up front, his dog, Susie, stretches out before him. In the back rows, Susie squats under the seat. Blind people say they can easily follow the story of a film by hearing dialogue, music and sound effects such as those in . . .



. . . *Destination Tokyo* which astounded moviegoers with its unusual underwater effects. As the submarine crept through Japanese nets toward its target, the gurgling sounds increased.



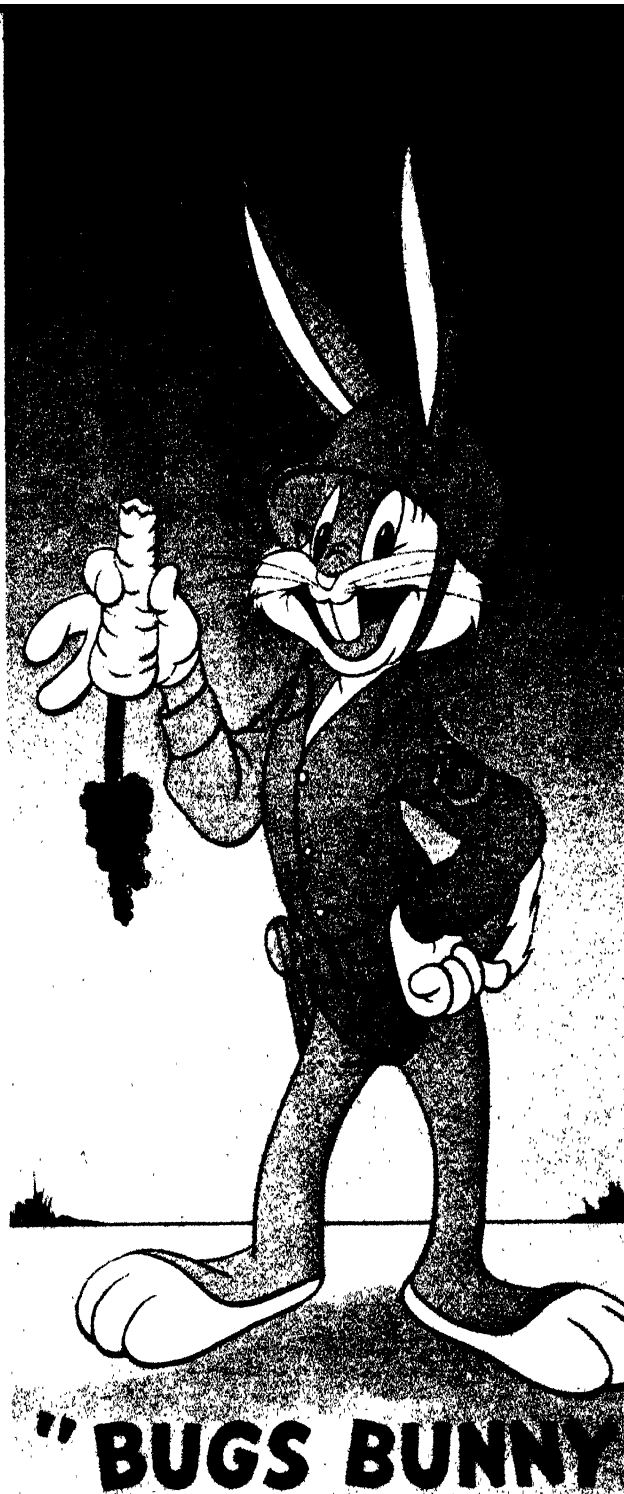
The oppressive feeling inside the sub was effectively communicated by underwater sound.



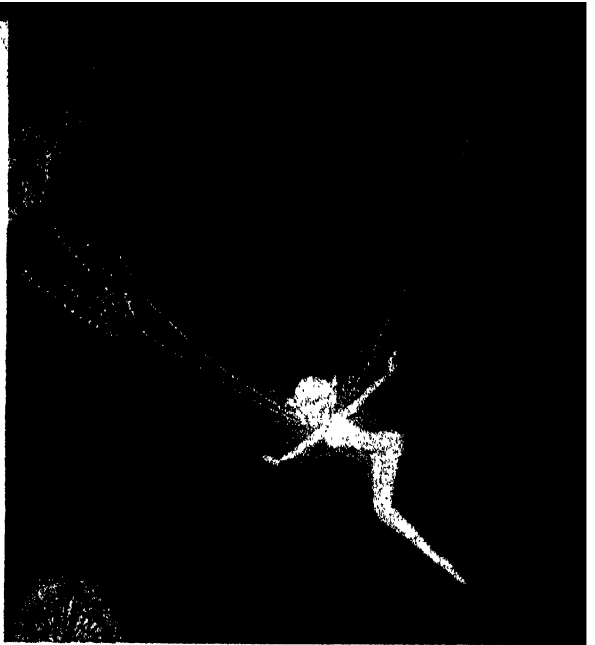
Comic animation inspired by artist's face . . .



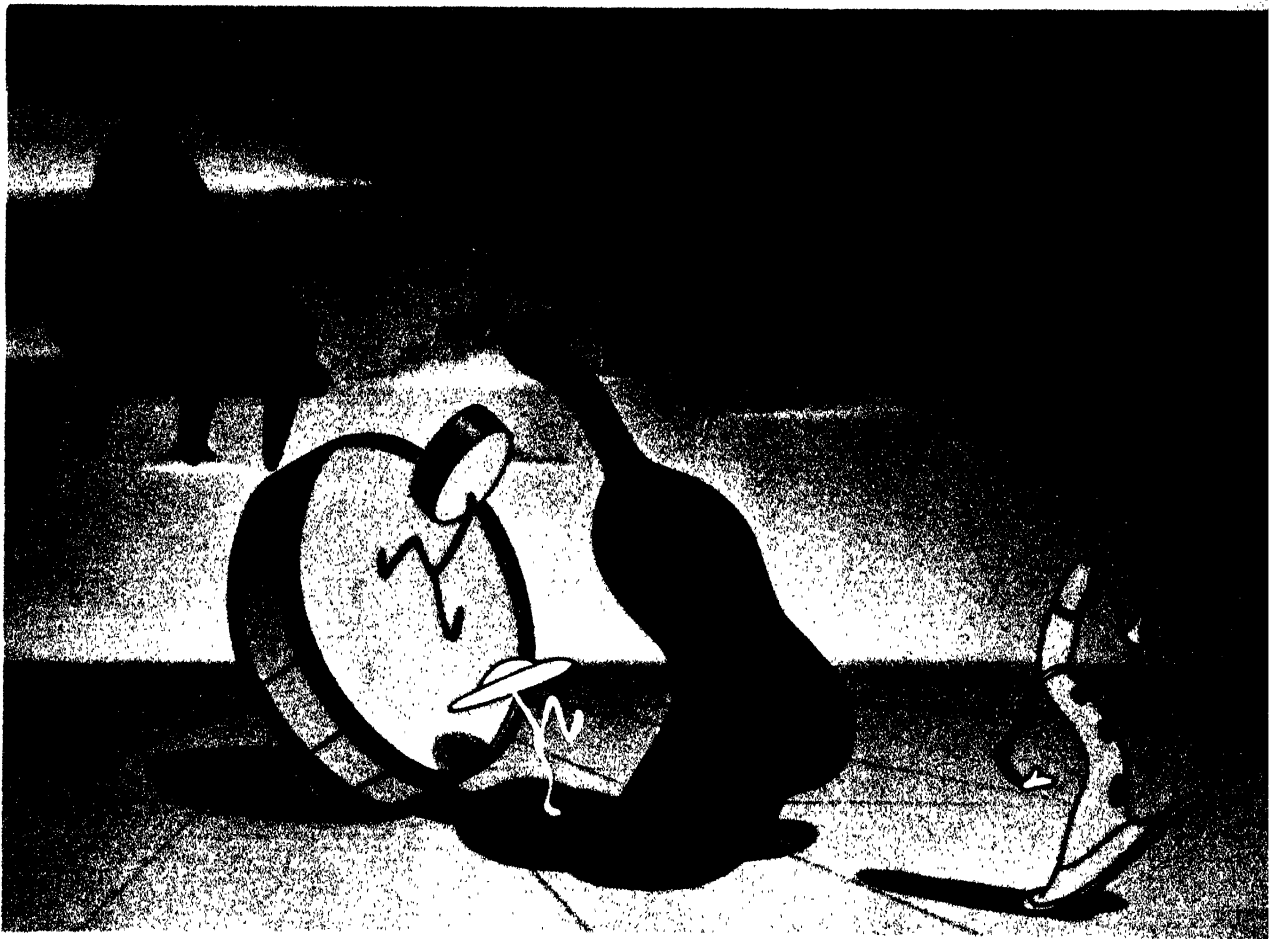
. . . is integrated with carrot-eating sound . . .



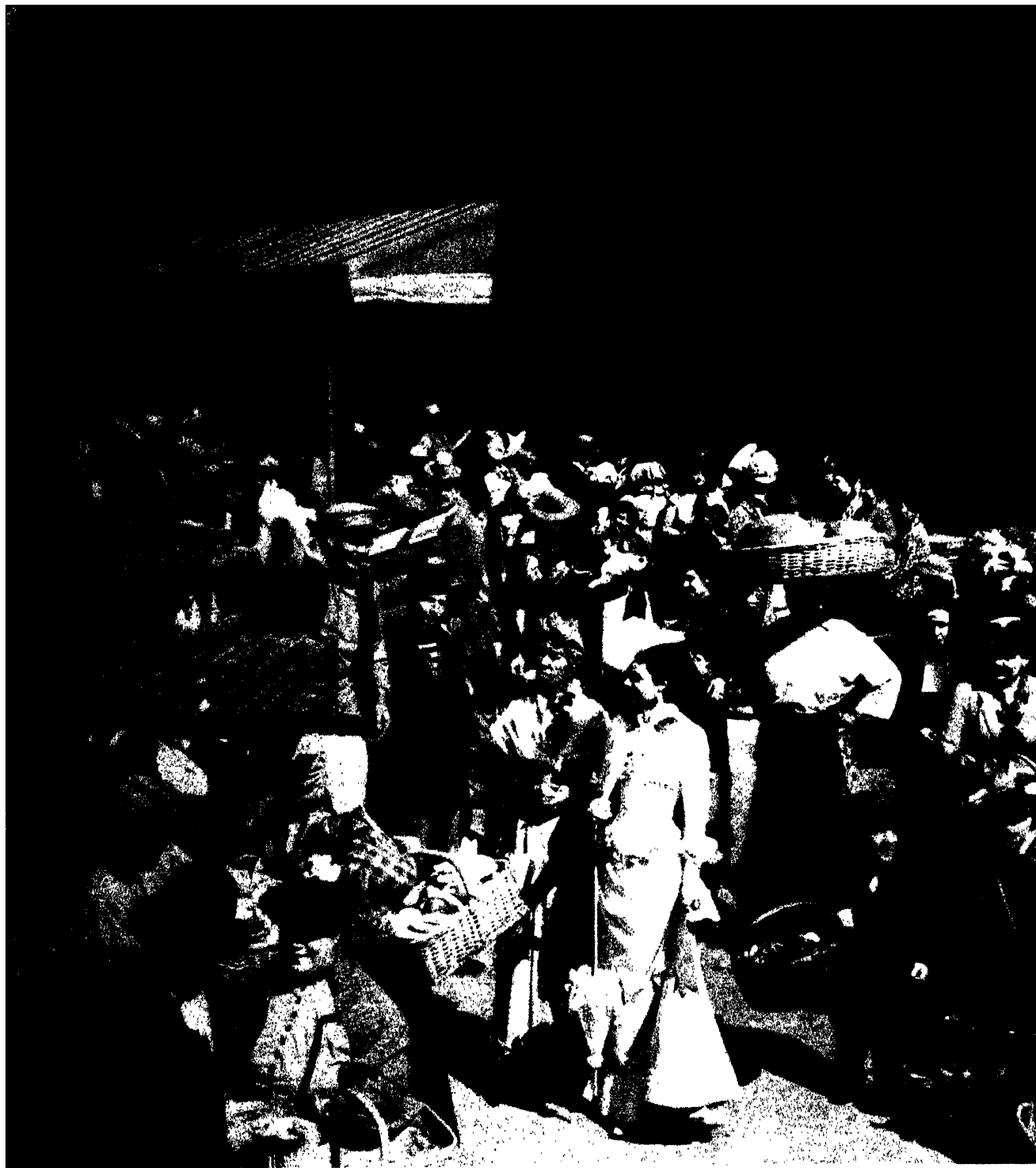
. . . for Warners' wise-cracking "Bugs Bunny."



Disney's *Fantasia* animated music by Schubert, Beethoven, Stravinsky, Mussorgsky, Tchaikovsky.



Make Mine Music, another Disney feature, showed the musical instruments themselves in motion.



All the color and atmosphere of a New Orleans market place was captured in the music for this scene in *Saratoga Trunk*. The excitement, dash and vitality of the film, achieved through an extremely mobile camera, found further expression in its exhilarating music. Max Steiner, one of Hollywood's most outstanding composers, produced a score whose identifying themes were used as effectively as those in a Wagnerian opera. There was a musical motif for every major character, and the music swung back and forth with the same facility of the camera.



Love scenes between Gary Cooper and Ingrid Bergman were played to a haunting refrain.



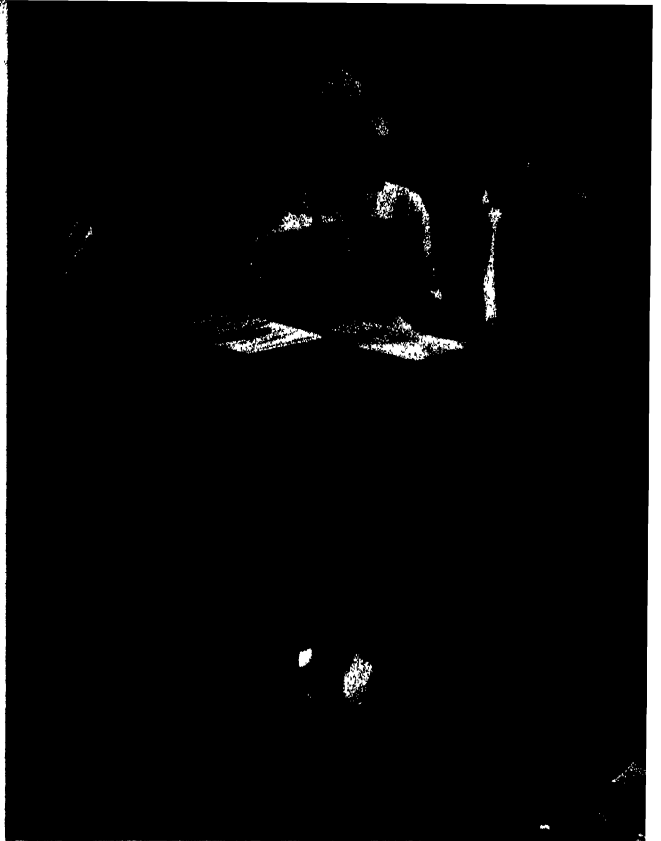
The sound film has made possible a whole new "literature" for the motion picture audiences of America. George Gershwin, shown here between Fred Astaire (left) and his brother Ira Gershwin, lived a life story whose heart-warming melody, pathos and tragedy could not have been captured on the screen as *Rhapsody in Blue* without sound to give it full meaning.



To make sure every detail, musical or otherwise, was correct, Warners' Leo Forbstein consulted men who had worked intimately with Gershwin like his brother Ira, Paul Whiteman and Oscar Levant (above).



Robert Alda played Gershwin in this film which captured an immortal body of music on film.



Night and Day was Warners' biography of another great composer, Cole Porter. On the front in World War I, he conceived *Begin the Beguine*, and in a camp hospital he wrote *Night and Day*.



After the war, Porter (Cary Grant) played piano in a dime store to study public taste.



Porter's smash musicals, like *50,000,000 Frenchmen*, introduced sophisticated Porter scores. *Just One of Those Things*, sung above, is typical of the "patter" song he made famous.



Mary Martin recreates her famous strip to Porter's *My Heart Belongs to Daddy*, in *Night and Day*.



CHAPTER TEN

Free Speech and Free Screen

THE VARIED political and social viewpoints which Americans hold are voiced in newspapers, on the radio and from the screen. The average American newsstand demonstrates the effectiveness of our Bill of Rights. A nation of diverse cultures, creeds and political ideals is held together by one deeply-rooted conviction—freedom. Freedom to speak your mind has been an American bylaw since the nation was founded. But the founding fathers never dreamed that a more powerful form of communication than pamphlets and broadsides would be invented 150 years after freedom was constitutionally defined. The talking film would be an entertainment medium, but in addition it would instruct and inform. To be effective, it must be free.

Unless it was to be a sugar-coated, unconvincing picture of American life, the screen had to mirror the national scene accurately. This posed the problems of taste and morality. With freedom goes responsibility, and the film industry itself voluntarily adopted the role of censor, in 1922, when the Motion Picture Producers and Distributors of America, headed by Will Hays, was organized.

Formation of the Title Registration Bureau was one of the first self-regulatory steps of the M.P.P.D.A. Offensive titles dropped off the marquees, not because anyone pointed a gun at the producers, but because they cherished their freedom enough to protect it. Always sensitive to public opinion, Hollywood did not want to jeopardize its future by indiscretions. Liberty, not license, was to be its ruling principle.

Always highly individualistic, the film companies banded together because they had a collective stake—freedom of the screen. They did so just in time—for public opinion was running high against the so-called "immorality of the movies." In 1922, bills for censorship were introduced in 32 state legislatures. A State vote on censorship was scheduled in Massachusetts. The roots of freedom were being attacked in the very region which gave them birth. But not without provocation. The films were reaching more people than ever before, and because of the intense rivalry in this rapidly expanding industry, individual companies had had little time or temper to pool efforts toward self-regulation. The screen was on trial, and to save a freedom which had been abused by some, other far-sighted and public-spirited producers and distributors set up the M.P.P.D.A. office for voluntary censorship.

The case was put squarely up to the public, which agreed to give the industry a chance

to prove its good faith. On November 10, 1922, Massachusetts rejected censorship, voting 553,000 to 208,000. The industry did prove itself capable of self-government, but the cry for state or federal regulation has never abated.

When Will Hays spoke from the screen at the *Don Juan* premiere in 1926, he ushered in, to use his own words, "... the beginning of a new era in motion pictures." That new era brought new problems in regulation, for what once might have been suggestive was now explicit. The *double entendre* was now a greater temptation for screen writers, since the plays and novels bought by story departments were far more daring than the silent film had been. The sound film would bring attendance to unprecedented levels and reach a highly impressionable mass audience. The job of self-censorship became tougher.

The M.P.P.D.A. office has saved motion picture companies thousands of dollars, in time and material, by consulting with producers before a picture is made. Knowing the costs of cutting after a picture has been filmed, the company confers with the Office at every stage of production. Very few cases come to public attention, because of the admirable liaison between the Office and the individual companies. A case such as the recent one involving *In Which We Serve*, where the deletion of 17 words became an issue between the Office and one of its member companies, spotlights the progress made in self-regulation. Made in England, this picture was not produced under the Hays code. The fact that its American distributor could challenge the decision of his own self-appointed governing agency proved the democratic principles behind the M.P.P.D.A.

The producers were not slow to respond to public opinion and clean up their productions. They justified the faith that had been placed in them and earned the right to freedom of the screen. But the question of taste and morality is only a small part of the issue of screen freedom.

The fine line where freedom of speech ends and propaganda begins was not a major Hollywood problem until World War I. The movies had spoken out against social injustice and had dared to present controversial issues. They had often risked box office slumps to expose the unpleasant side of American life. They had been free to speak out and had used that freedom constructively. In 1941, when the industry was suddenly accused of war-mongering, producers who had attempted to present international events factually and to warn the nation of international aggression were stunned.

Fortunately, the privilege of free speech was not denied them as individuals, even though it had been temporarily questioned in the industry. They hired a lawyer, the late Wendell Willkie, and went on the stand before a Senate investigating committee to answer Senator Nye's accusation that "the movies have ceased to be an instrument of entertainment and have become the most gigantic engines of propaganda in existence to rouse the war fever in America and plunge this nation to destruction."

Again the producers banded together to fight for their American privilege of free speech. Speaking for them Mr. Willkie said: "The investigation and harassment of free expression in the United States, is a procedure, once accepted, that may be applied to the theater, to newspapers, to magazines, to the radio, to publications of all kinds and finally, to the right

of public officials and private citizens to speak freely. As American citizens, we protest this as vigorously as possible."

The hearing wore on through September, with the Senate Committee, largely isolationist, attacking the industry representatives for their alleged "war propaganda." Senator Nye even argued that motion pictures were not entitled to protection under the First Amendment of the Constitution. The committee was eventually defeated, not by the weight of evidence presented by the industry, but by the fair-mindedness of Senator Ernest W. McFarland, of Arizona. He maintained that such an investigation should not be held because of the screen's inalienable right to freedom of speech. However, since he could not stop Nye, he at least listened to the evidence. Wendell Willkie, the industry's counsel, was not allowed to cross-examine witnesses. But McFarland managed to bring material to light which the other Senators would rather have suppressed. When examining Harry Warner, he summed up the general public reaction to the investigation:

Senator McFarland: "In regard to the breeding of hate by certain pictures that have been referred to, I take it that it is your idea that those pictures do not breed hate against the German people, but against the German system?"

Mr. Warner: "That is correct, sir."

Senator McFarland: "And by showing that that system is bad, it should unite our people behind our own system, the American system?"

Mr. Warner: "That is *exactly* what I mean." (Applause).

Senator McFarland: "I believe that by going right after the facts we can do better. I am sorry that we have gotten this down into a debate between the isolationists and non-isolationists, because I suspect that I am in the minority on this committee on that; but I would call attention to the fact that we are in the majority on the floor of the Senate. (Applause). I also believe that the American people believe as you do, that we should give aid to Britain. I will agree that no one wants to see the United States involved in war, and we believe that we are pursuing the policy that we think is right. Senator Clark, Senator Tobey and Senator Brooks think the same about their policy."

The investigation struck sparks of public opinion from everyone concerned with American liberty. Dorothy Thompson wrote: "This fight is our fight. It is the fight of every human being who believes in freedom of speech, habeas corpus, intellectual integrity and freedom from intimidation." It was a trenchant reminder, that in the midst of national crisis, we could not afford to lose our national liberties. The entire inquiry was a travesty on justice and liberty. With the exception of McFarland, the "jury" had already made up its mind.

The Senate investigation might have ended tragically, and freedom of the screen might have been suppressed forever had it not been for McFarland's pointed questions and public spirit which recognized the inquiry for what it was. Despite its absurdity, the whole affair spotlighted a question which had not previously been challenged, and it formally established political freedom of the screen as a constitutional right along with the other freedoms guaranteed in our Bill of Rights. What started out to be an investigation to determine whether or not

an investigation would have to be made, ended in a complete rout of the investigators. Testimony by Nicholas Schenk, Darryl Zanuck, Barney Balaban, and Harry Warner, capped the investigation. Warner spoke for his industry when he said: "Freedom of speech, freedom of religion and freedom of enterprise cannot be bought at the price of other people's rights. I believe the American people have the right to know the truth. You may correctly charge me with being anti-Nazi, but no one can charge me with being anti-American."

When the nation officially declared war on Naziism, just three months after this witch hunt had begun, freedom of the screen became an emergency question. Once committed to war, Americans had to define freedom in terms of national security.

Just 11 days after Pearl Harbor, President Roosevelt handed down his official definition of censorship during this emergency period. In a letter to Lowell Mellett, Director of the Office of Government Reports, he wrote: "The American motion picture is one of our most effective media for informing and entertaining our citizens. The motion picture must remain free insofar as national security will permit. I want no censorship of the motion picture; I want no restrictions placed thereon which will impair the usefulness of the film other than those very necessary restrictions which the dictates of safety make imperative."

The film industry co-operated to the fullest with the government in making service films. They used their freedom to fight for freedom. War's end brought a greater demand for pure entertainment—the films' major goal. But the lessons learned in the critical pre-war years stay with Hollywood's producers, actors and writers. As a means of communication, the screen cannot be measured by the same standards as the press, literature, radio. Because of the tremendous entertainment value of motion pictures, propaganda can be sugar-coated and swallowed by some gullible filmgoer who just dropped in for a double feature and a short. The impact of film propaganda is greater and stays with audiences longer than the same message in another form. No oratory is as persuasive as a single shot from a dramatic film. And sound has increased the persuasiveness of film content to an unparalleled degree.

Self-regulation has worked in Hollywood and pressure groups must find other media through which to voice their platforms. Documentaries which frankly avow a "message" or "thesis" are presented as such by industries, business and labor organizations or governmental agencies. An insurance group may produce a film on economic security, the United States Film Service may produce *The River* to make a plea for government flood control. National problems—and especially their solutions—are open to controversy. Some of us may not agree with the point of view expressed in a government or industry film. Very well then, let someone make another film to show issues not raised in the original treatment.

The film industry is a great respecter of the free enterprise system, since that is the system under which it grew so rapidly and under which it now flourishes. Nobody in Hollywood has to make over a film or rewrite a symphony because the head of his government doesn't like it. Any independent who has an idea for a film and knows how to make it, can get the facilities to produce and distribute it. Independent film groups set themselves up in business continually. There is no lack of opportunity in Hollywood.

Without free enterprise, free speech is a mockery, and vice versa. Without free speech and free enterprise, the public will not get imaginative, forceful, dramatic films. Entertainment would suffer under any kind of regimentation, for it is free competition for the public's approval that has improved screen entertainment through the years.

The films have done more than fight alien "isms," they have built a deeper understanding of American ideals. As a tribute to the country which made their phenomenal growth possible, and which protected their fundamental liberties, the film industry produced *Land of Liberty*. It contained cuttings from shorts like *Let Freedom Ring* and *The Declaration of Independence*, newsreels and 124 feature pictures—among them: *Moby Dick*, *Cimarron*, *The Covered Wagon*, *In Old Chicago*, *San Francisco*, *The Big Parade* and *Sutter's Gold*. Proof of the industry's continued dedication to American principles of freedom was the fact that this panoramic historical film was made entirely from previously run films. Not a scene had to be shot and the film covered 150 years of history.

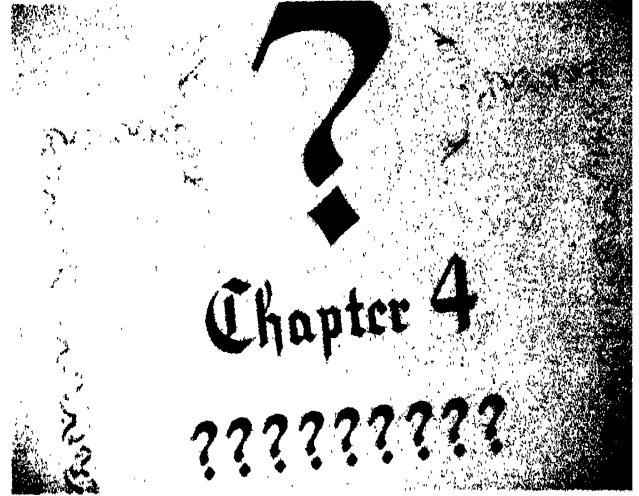
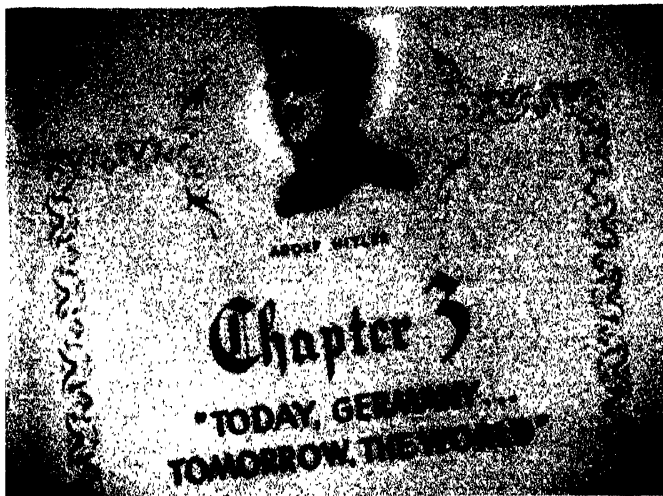
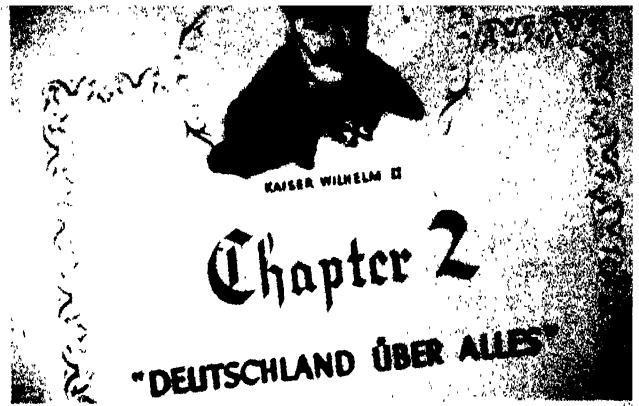
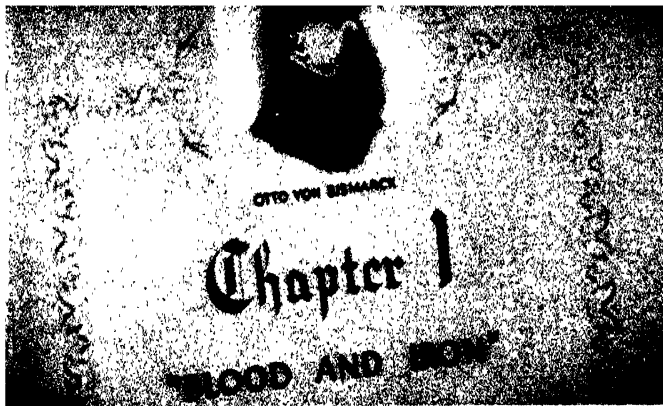
The new role of the film is to entertain and inform the world about the principles of independence and freedom. Accepting the Hollywood Foreign Correspondents First World Peace Award for *Hitler Lives?* Jack Warner promised: "The politically free screen must fight evil with truth. It must combat intolerance by revealing how decent people behave."



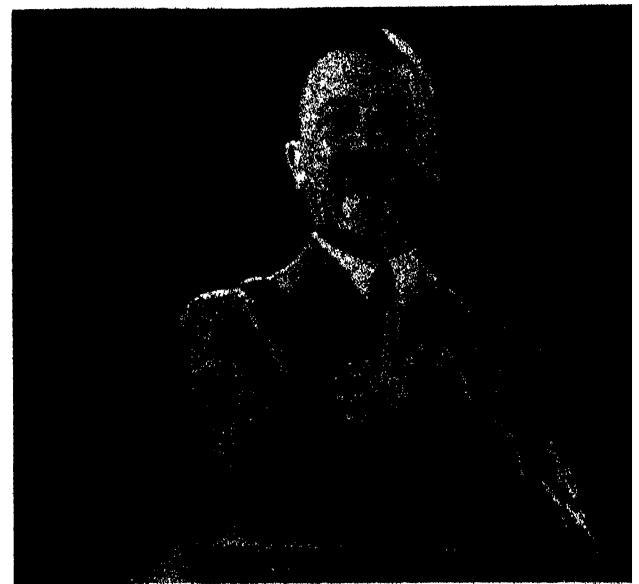
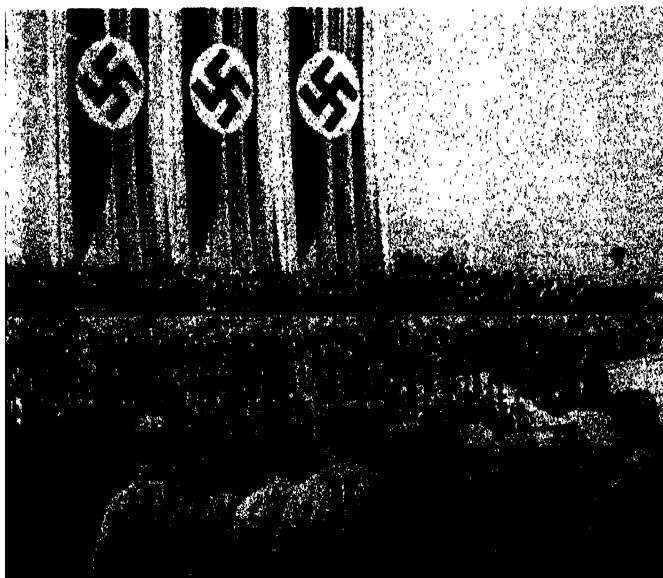
To remind Americans of the political freedoms they nearly lost, Warners made *Hitler Lives?*



Using their inalienable rights to freedom of the screen, today's producers speak out fearlessly on current issues. This short feature, made largely of captured German film and newsreels, showed German atrocities in World War II and their plans for conquest which . . .



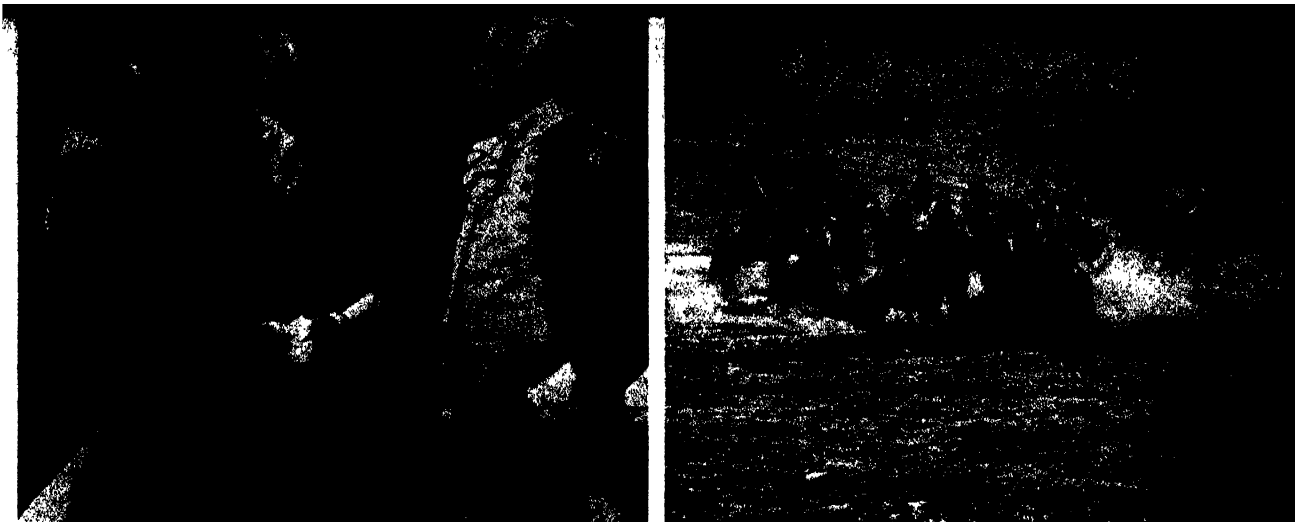
... can be traced back in German history to other bloody fuehrers—Bismarck and the Kaiser.



To defeat Germany had not been so easy this time, and it might be impossible next time. The film shows that Hitler still lives in the national consciousness of the German people, says that before we accept their friendship, we must make sure that their will to conquer is dead.



In sharp contrast to the indoctrination of German youths portrayed in *Hitler Lives?* are the patriotic films shown to American children. By presenting the human story behind the American fight for liberty, textbook history comes alive. Warner Brothers are leaders in this movement to insure the preservation of freedom by teaching the principles of freedom through the sound film. Their *Sons of Liberty* series presented little-known patriots like Haym Solomon (played by Claude Rains above), an important Revolutionary figure, as well as . . .



. . . more famous heroes like Lafayette and Washington who fought the battles of freedom.



In one of the series, *The Bill of Rights*, James Madison speaks out for Constitutional freedom.



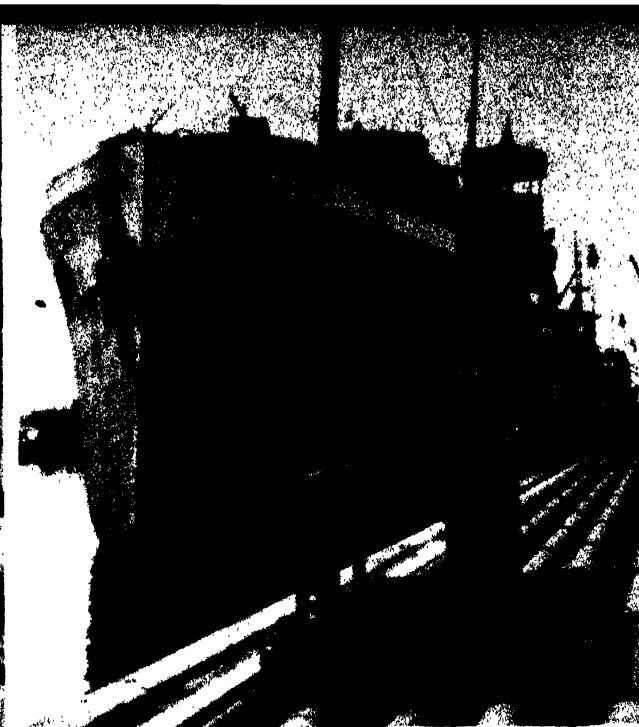
The Romance of the Louisiana Purchase described the acquisition of territory.



The Song of a Nation dramatized the story behind Francis Scott Key's writing of *The Star-Spangled Banner* while imprisoned on a British battleship in the war of 1812.



Lincoln in the White House portrayed the Great Emancipator's career. Characterizations of Lincoln have been many. Best known was that of Raymond Massey in *Abe Lincoln in Illinois*.



National magazines are extending their press freedom to the screen. These are stills from THE MARCH OF TIME's documentary shorts, *The Veteran Returns* and *Palestine Problem*.



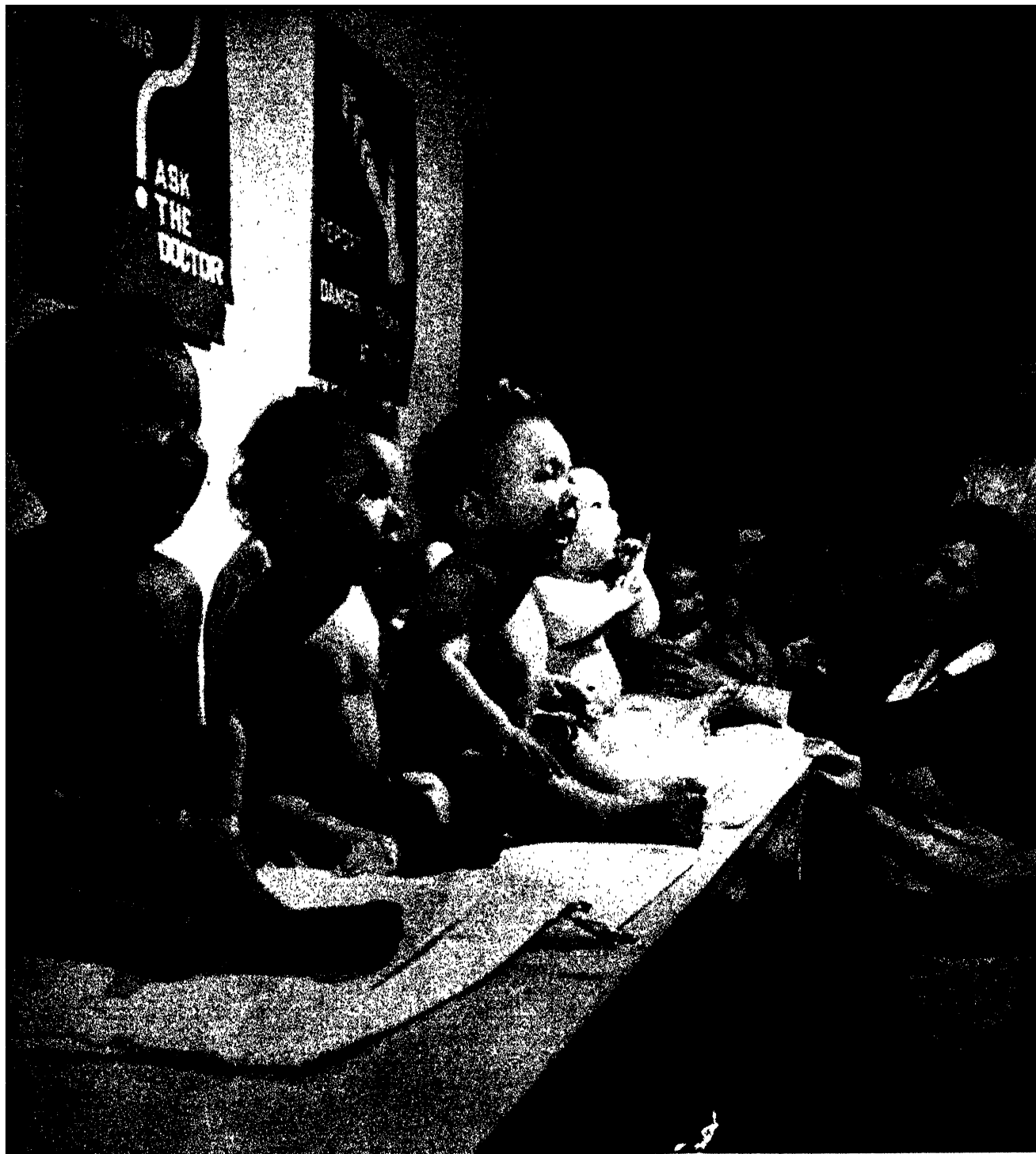
Inside China Today and *Memo from Britain* add sound and motion to picture journalism.



THIS WEEK magazine co-operates with RKO productions in a series of shorts titled *This Is America*. This is a still from one film in the series, *Report from Japan*.



Flight to Everywhere, another *This Is America* short, deals with the Air Transport Command.



LOOK magazine focuses its film program on domestic subjects such as child welfare and public health. These public service shorts frankly discuss American social questions like juvenile delinquency. *Hometown, U.S.A.* was filmed in an average American city to show a cross-section of national life. An *Art of Living* series handles emotional tensions of adolescents in relation to their family and friends. Because they are made without censorship, these magazine-sponsored films carry the same punch as a good feature news story.



THE MARCH OF TIME covered the national scene too. A short on teen-agers was one of its best.



Accurately done, thanks to a young advisory board, it explained the adolescent to his critics.



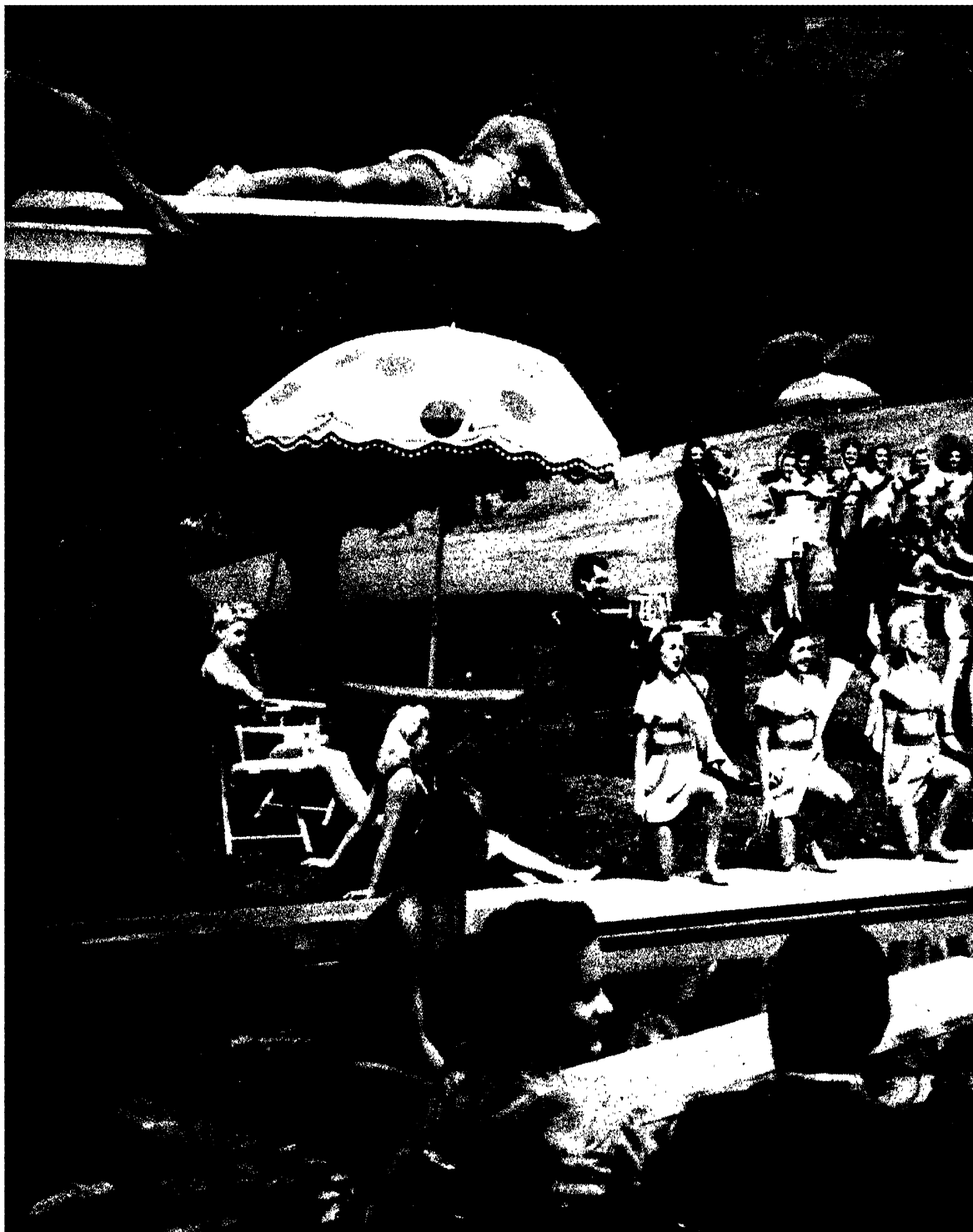
Wilson, made by 20th Century-Fox, treated controversial issues with full editorial freedom.



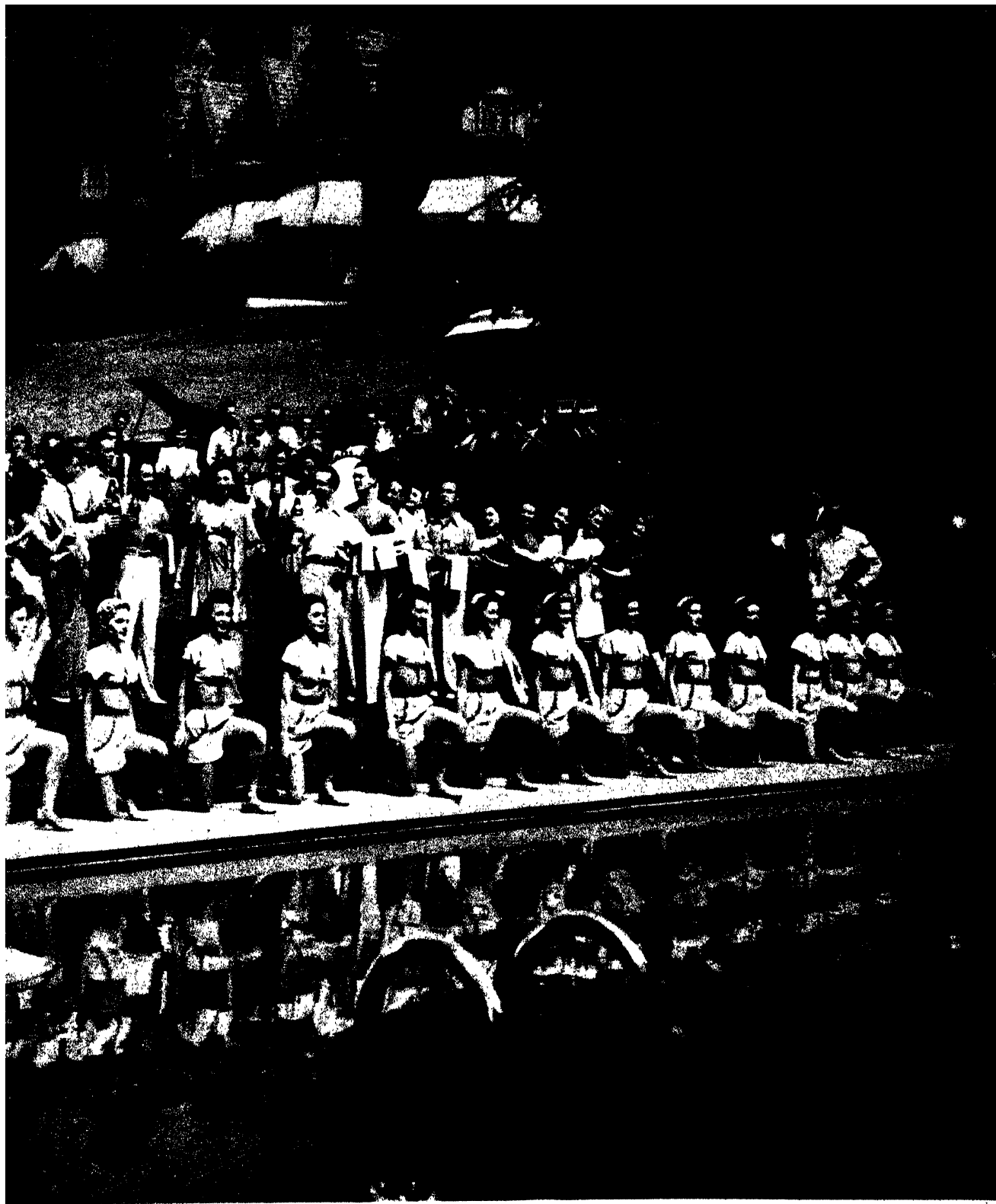
Going My Way symbolized our religious freedom—was applauded by people of all faiths.



The House I Live In, with Frank Sinatra, championed freedom for men of every creed and color.



... to the glittering extravaganza of super-productions like *Night and Day*. Few among the millions who thrill to its poignant story, its beautiful music and vivid color can recall the crude, fumbling efforts that were the screen's first talking pictures. Fewer still knew at first hand the



men whose genius, sweat and inspiration created the sound picture and brought it to the theater of America: Bell, Edison, Armat, DeForest, Case, Sponable, Eastman, and Sam Warner. The story of sound film is unfinished. The screen will speak in voices yet unheard.

Acknowledgments

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